THE OIL WEEKLY

ENGINEERING « NEWS » STATISTICS

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The Oil Man's Calendar

OCT.	
16–20	National Safety Congress, Atlantic City, N. J.
17	National Stripper Well Association, Fort Worth, Texas.
18–20	Independent Petroleum Association of America, Fort Worth, Texas.
19–20	A.I.M.E. Petroleum Division, Los Angeles.
NOV.	
13–17	American Petroleum Institute, Stevens Hotel, Chicago.
14	25-Year Club, Stevens Hotel, Chicago.
15–17	American Institute of Chemical Engineers, Providence, R. I.
DEC.	
4– 7	American Society of Mechanical Engineers, Philadelphia.
4– 9	Exposition of Chemical Industries, Grand Central Palace, New York.
14–15	Petroleum Electric Power Association, Texas State Hotel, Houston, Texas.
APR.	
10–12	American Association of Petroleum Geologists, Chicago.
11–12	American Petroleum Institute, Eastern District, Division of Production, Columbus, Ohio.

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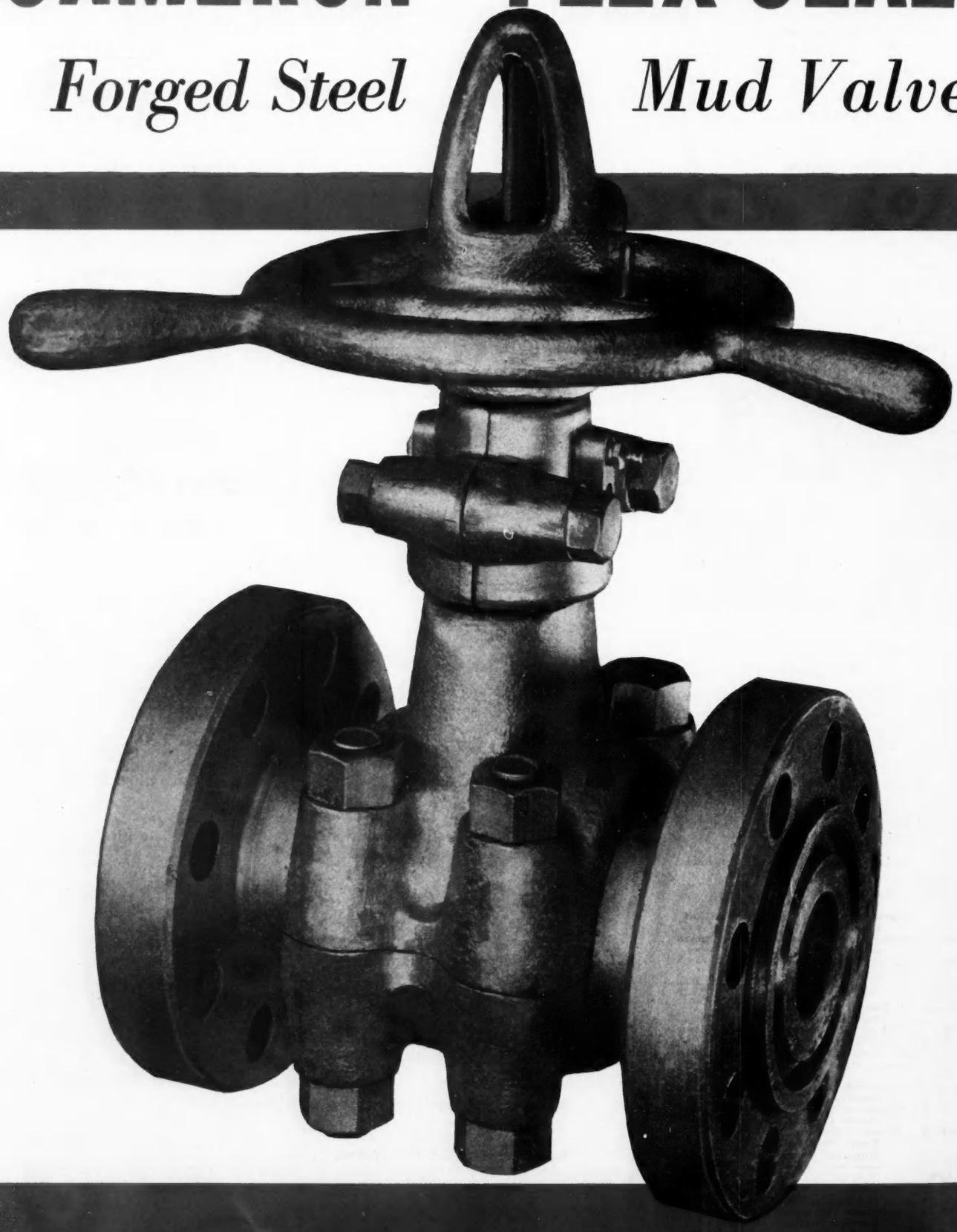

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THE OIL WEEKLY

OCTOBER 16, 1939

VOLUME 95 NUMBER 6

The Week's Panorama

ALTHOUGH crude oil production and rrefinery runs were curtailed in the week ended October 7, the statistics of the seven days were not quite satisfactory. Plant operations still were dangerously high, and yields of the different products from the crude that was processed were not in conformity with the varying trends of consumption. Refiners have not been giving due recognition to the need for relatively large yields of both light and heavy fuel oils and for relatively low yields of gasoline.

Gasoline output has continued so large as to prevent normal seasonal withdrawals from storage, and fuel oils have not been turned out in quantities equaling current consumption. Consequently, gasoline stocks are larger than a year ago and materially in excess of estimated minimum requirements; while stocks of both light and heavy fuel oils are lower than a year ago, despite the fact the market requirements are greater.

Crude runs to refinery stills, near all-time record proportions in the previous week, were cut back 55,000 barrels in the week of October 7 to an average of 3,505,000 barrels daily. The runs then were, nevertheless, 8.6 percent greater than in the first week of October last year.

Gasoline Stocks Large . . .

Gasoline production was cut down, through the curtailment of crude runs, to 12,001,000 barrels for the week of October 7, the output having averaged 1,714,428 barrels daily, or 12,000 barrels a day less than in the previous week.

This relatively small reduction of gasoline production was not enough to have a favorable effect on gasoline inventories, having failed to permit a normal withdrawal during the week. The stocks came down only 16,000 barrels, to 71,152,000 barrels as of October 7, at which time they were 3.6 percent larger than on the corresponding date last year.

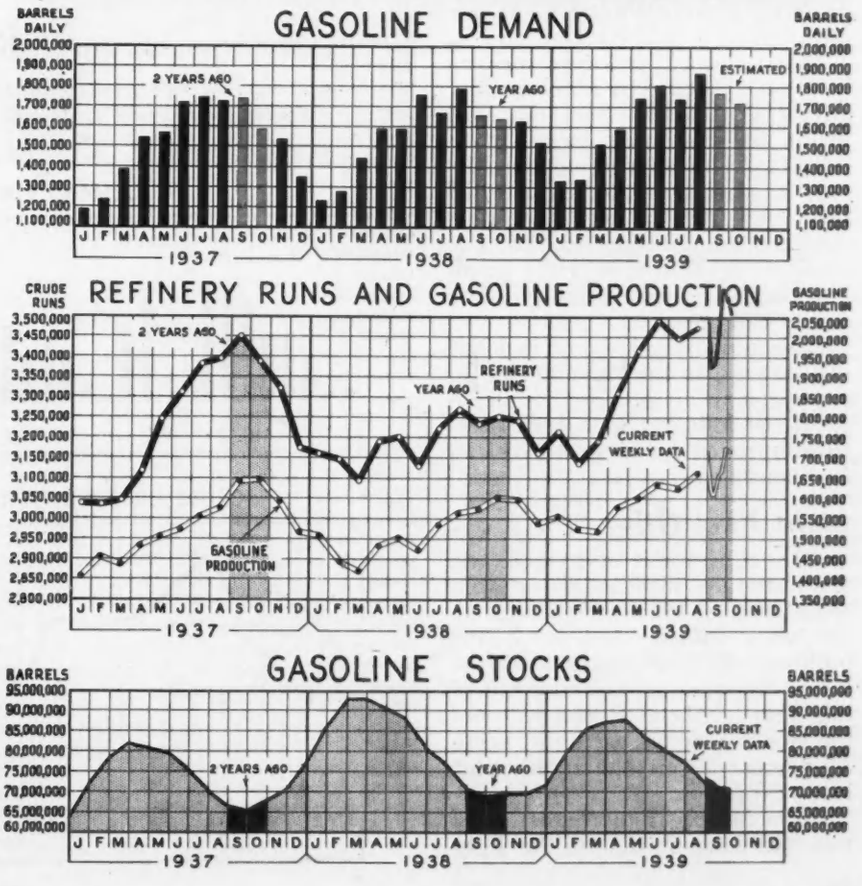
If gasoline stocks had been at the proper economic level a year ago, this gain of 3.6 percent at this time would be justified, in view of the fact gasoline demand is running about 5 percent higher. However, the stocks a year ago were seriously excessive, and being now in about the same relationship to demand as then, they still are substantially larger than desirable. Economists estimate that the present supply is around 10,000,000 barrels above currently needed working stocks.

Vigilance Required . . . .

The adverse implications of the present gasoline inventories are soft-pedaled by some, on the

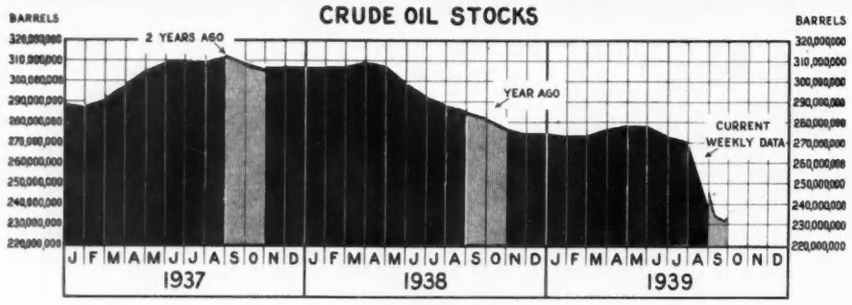
Gasoline Output Down but Stocks Lowered Little

Production still high in week ended October 7, despite some curtailment of refinery runs; withdrawal from storage less than normal.



Crude Production and Refinery Runs Reduced

Output of wells lowered below indicated market demand in week ended October 7, but runs to stills relatively high despite decline.


CRUDE OIL STOCKS
BARRELS
2 YEARS AGO
YEAR AGO
CURRENT WEEKLY DATA
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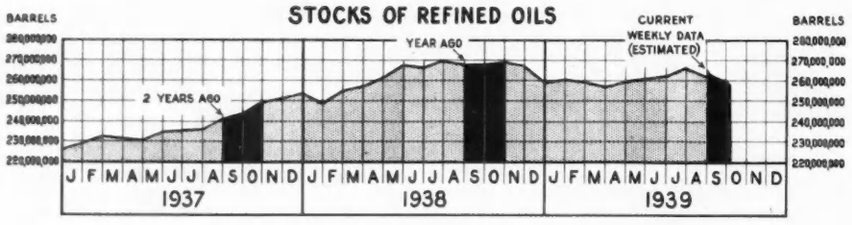
1937
1938
1939


STOCKS OF REFINED OILS
BARRELS
CURRENT WEEKLY DATA (ESTIMATED)
YEAR AGO
2 YEARS AGO
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1937
1938
1939

grounds that the European war should help to liquidate the surplus. However, many uncertainties are involved in the European affairs; gains in exports have not yet occurred, although expected; and any added foreign business could be handled by the stepping up of gasoline production as the orders develop, without the necessity for advance accumulation.

Furthermore, it seems inevitable that the current exceptionally strong demand for fuel oils will result in continued large crude runs to stills for meeting that demand; and that there will be throughout the fall and winter an ever-present tendency to turn out along with the fuel oil more gasoline than the markets and gasoline stocks can absorb.

Consequently, vigilance in holding down gasoline inventories in coming months definitely is needed, if the industry is to turn present improved business conditions to advantage.

Light Fuel Oils . . . . . .

Although stocks of gas oil and distillate fuels were increased from 38,081,000 to 38,549,000 barrels in the week ended October 7, the build-up of those heating oils so far during the summer and fall of this year has been subnormal, and the stocks now appear light, being 3.2 percent lower than at this time last year.

From March 31 to August 31 of this year the stocks of the light oils were increased 9,000,000 barrels, compared with additions of 10,000,000 barrels in the similar period of 1938 and 9,000,000 barrels in 1937. During September of this year, there was practically no further net addition, whereas the seasonal build-up usually continues on through both September and October. The September accretion amounted to 2,000,000 barrels in 1938 and 1,000,000 barrels in 1937.

Industrial Oils . . . . . .

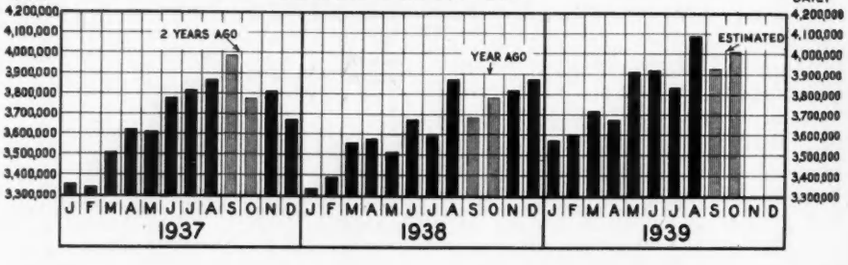
Inventories of residual fuel oils were heavily drawn upon in the week ended October 7, as industrial activity continued brisk, the stocks having been reduced over a million barrels, or from 115,466,000 to 114,397,000 barrels. The supply now on hand is 9 percent smaller than that held at this time last year, whereas demand is running more than 10 percent higher. The strong demand reflects primarily the sharply increased industrial production lately in the United States, but also expected increases in exports because of the war.

Increases in prices of bunker oil and Diesel oil for ships have been among the most noteworthy that have occurred during the past two months, having amounted to around 20 cents a barrel.

Bunker C fuel oil currently is quoted generally at $1.15 a barrel in ships' bunkers at New York harbor and at 95 cents on the Gulf Coast. Diesel oil has been advanced to a range of $1.75 to $1.90, ships' bunkers, at New York, and to $1.55 to $1.75 on the Gulf Coast.

Crude Stocks Rise Slightly from 17½-Year Low

Crude storage increases, but refined oil stocks decline, as withdrawals of gasoline and heavy fuels outweigh additions to heating oils.


DEMAND FOR ALL OILS
BARRELS DAILY
2 YEARS AGO
YEAR AGO
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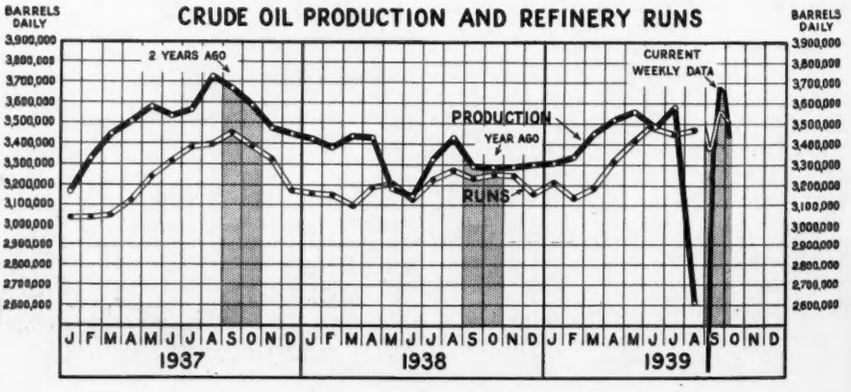
1939


CRUDE OIL PRODUCTION AND REFINERY RUNS
BARRELS DAILY
2 YEARS AGO
CURRENT WEEKLY DATA
PRODUCTION
YEAR AGO
RUNS
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1937
1938
1939

Petroleum Supply of Axis Powers Short of War Needs

By V. R. GARFIAS and J. W. RISTORI
Cities Service Company, New York

Presented October 7, 1939, before the Petroleum Division meeting of the American Institute of Mining and Metallurgical Engineers at Galveston, Texas, and published here in slightly abstracted form.

ONE of the most serious problems now confronting Germany, and that will affect Italy even more seriously if she goes to war against England and France, is that of supplying their navies, mechanized armies and air forces as well as their industrial and other needs with the necessary petroleum and related products. And this problem, serious as it is at present when intensive war with England and France is yet pending, will become vital when hostilities on a large scale develop.

The consumption of petroleum and related fuels for *civil purposes only*, of Germany, Russia, Italy, the Balkan States, and neighboring countries is shown in Table 1 for the years 1937, 1938 and 1939. The world figures of civil consumption which the writers have been compiling and making public for the last 10 years, are available from reliable sources and can be corroborated. The table shows a consumption by these countries of 282,000,000 barrels during 1939, or an increase of 15,000,000 barrels over the previous year.

It should be kept in mind however that in addition to this consumption for civil purposes there has been and there is now in these and other countries consumption for *military purposes*, the amount of which is not divulged and can only be approximately estimated. From certain indications as to otherwise unaccounted for discrepancies between figures of production, civil consumption, exports, imports and storage the writers have estimated from time to time this military consumption. The figures in Table 1 also show the total consumption both for civil and military purposes for the year 1940 by the nations in question, assuming that a large scale war continues through the year and that Italy and Russia as well as Germany are involved in it.

It may be noted that the total war-time consumption of these countries of 404,000,000 barrels for 1940, is 121,800,000 barrels more than their civil consumption for 1939. It is believed by the writers that these 1940 figures are ultra-conservative if the full petroleum war requirements are to be made available to the nations in question. It should be pointed out that others have estimated the war-time consumption for military purposes of these nations at from 10 to 20 times their peace time consumption for the same purposes, and that the estimate here presented assumes a much more restricted expansion.

The production of oil and related fuels of these countries is shown on Table 2, care being taken to make the estimates for 1940 amply large. A comparison of this table with the preceding one shows that

TABLE 1

Consumption of Petroleum and Related Products
(in barrels)

COUNTRIES	Civil Consumption Only			Military and Civil Use
	1937	1938	1939*	1940*
Russia	158,200,000	164,500,000	175,000,000	240,000,000†
Germany	45,300,000	53,000,000	55,000,000	90,000,000†
Italy	20,000,000	21,000,000	23,000,000	40,000,000
Roumania	12,600,000	14,200,000	15,000,000	20,000,000
Poland	2,800,000	3,400,000	3,000,000	.....
Hungary	1,900,000	2,000,000	2,000,000	2,500,000
Switzerland	3,300,000	3,500,000	3,700,000	4,000,000
Greece	2,400,000	2,400,000	2,500,000	3,000,000
Turkey	1,200,000	1,200,000	1,200,000	2,000,000
Yugoslavia	900,000	1,000,000	1,000,000	1,400,000
Bulgaria	800,000	800,000	800,000	1,100,000
Total	249,400,000	267,000,000	282,200,000	404,000,000

* Estimated. † Includes part of Poland.

TABLE 2

Production of Petroleum and Related Fuels
(In Thousands of Barrels)

	Russia*	Roumania	Germany	Poland	Italy†	Hungary	Total
1937	200,000	53,000	15,300	3,900	500	.....	272,700
1938	208,000	49,000	17,300	3,900	500	300	279,000
‡1939	223,000	50,000	20,000	4,000	1,000†	1,000	299,000
‡1940	240,000	55,000	25,000	4,000	1,200†	1,800	327,000

* Excludes Sakhalin Island production. † Includes Albania. ‡ Estimated.

the total production of these countries falls at least 77,000,000 barrels short of meeting their total war requirements for 1940.

In case Russia, Italy and Germany are at war against the democracies throughout 1940, it becomes of interest to note the position of each of these countries as regards petroleum supply and requirements during that year.

Russia Not Exporting

Russia it is estimated will have in 1940 a balanced production and consumption of close to 240,000,000 barrels. It has been stated frequently that an alliance between Germany and Russia would open up large supplies of petroleum to the former from the latter country and the difference in barrels between Russia's production and the civil consumption in 1939 may lend color to the picture of a large exportable surplus of Russian oil. The fact remains, however, that in 1939 Russia is not exporting oil in any appreciable quantity, on net balance, and has not been doing so in recent years when her imports and exports have been approximately equal. Indications to the contrary notwithstanding Russia has no appreciable exportable surplus of petroleum at present, after it takes care of its domestic and military requirements. The explanation for the discrepancy noted above, seems to lie in one or more of the following conditions: (a) that the actual production is smaller than the official Russian figures indicate; (b) that the actual domestic consumption is greater than reported; (c) that for some years past, Russia has been storing away petroleum and using large quantities in military activities figures of which as previously noted not being made public.

Italy Would Need Oil

Italy is estimated to have a 1940 production of 1,200,000 barrels, including the production of the former Albania, against war time total demand of 40,000,000 barrels, or an indicated deficit of 38,800,000 barrels, to be made up from imports. Under the conditions prevailing during the past year or so, 61 percent of Italy's imports, as shown on Table 4, have come from North and South America, and in case of war the difficulties of maintaining any such supply in face of a British-French blockade are obvious.

If Italy should—which is extremely doubtful—gain control of shipping in the Mediterranean, she would shut off the Iraq fields to France and England but could scarcely increase her own or her allies supply unless they gained control of the fields themselves. And this could scarcely be accomplished quickly enough to afford much relief during 1940 as the Iraq wells and the pipe lines to the Mediterranean would probably be destroyed by their present owners before the Axis powers took possession. A struggle for control of the Mediterranean, which would most probably be the actual development, will make shipping so unsafe that tanker traffic would be reduced, if not stopped altogether, so as to force Italy and her allies to rely on Roumanian oil.

Germany Faces Shortage

Germany with a production of 25,000,000 barrels of petroleum and synthetic oils in 1940 against a war-time requirement of 90,000,000 barrels would show a shortage of 65,000,000 barrels. It should be noted, as shown on Table 4, that 80 percent of Germany's imports in 1938-1939 came from North and South America and that this oil will be made unavailable by the blockade during war. Ten percent of Germany's imports were derived from Roumania and only 2 percent from Russia.

The reasons for doubting that Russia has the production to make up any important part of the 77,000,000 barrel deficiency in 1940 have been given above, but even if this reasoning is incorrect, and Russia has more exportable petroleum than the evidence shows, and if she would be willing to make a supply available to Germany by restricting her own demand, still the problems of transporting enough of it to western Germany in time to relieve a shortage developing in 1940 appear very difficult if not insurmountable. This task involves 600 miles of tank steamer transportation on the Black Sea and 1200 miles of river and/or rail transportation from the Black Sea coast to Germany.

At any rate, even if Russian petroleum should be available, the difficulties of transporting it to Germany, by any possible route, would be greater than those of transporting Roumanian oil, which are discussed in a later paragraph. It seems then, that the greatest service Germany can expect from Russian oil is for it to replace Roumanian oil in the Balkan states, and so release greater quantities of that oil for use in Germany and Italy. It must be again emphasized, however, that there is no evidence that Russia has any such exportable surplus.

Roumania Important

We will now consider the question of how far Roumania could make good any such deficiency.

TABLE 3

Roumanian Exports in 1938

(In Thousands of Barrels)

	Crude	Gasoline	Kerosene	Fuel Oil or Bunkers	Lubricant	Total
Germany	114	3,021	1,009	1,214	92	5,450
Czecho-Slovakia	802	1,149	336	65	....	2,352
Total	916	4,170	1,345	1,279	92	7,802
France	254	1,890	225	23	....	2,392
United Kingdom	....	1,785	1,113	1,341	....	4,239
Spain	....	811	....	268	....	1,079
Belgium	....	507	....	269	....	776
Switzerland	....	646	....	42	....	688
Greece	....	381	173	941	....	1,495
Tunisia	....	372	126	115	....	613
Italy	489	363	405	2,655	....	3,912
Hungary	305	350	416	299	....	1,370
Syria	....	282	231	116	....	629
Yugoslavia	247	279	250	264	....	1,040
Denmark	....	224	....	....	....	224
Egypt	....	219	1,016	816	71	2,122
Palestine	....	194	242	85	....	521
Sweden	....	172	....	54	....	226
Morocco	....	171	....	....	....	171
Turkey	....	109	....	189	....	298
Algeria	....	106	....	....	....	106
Bulgaria	185	103	149	132	....	569
Malta	....	....	155	71	....	226
Bunkers	....	....	....	2,550	....	2,550
Miscellaneous	59	340	565	74	121	1,159
	2,455	13,474	6,411	11,583	284	34,207

Roumanian production in 1938 was close to 49,000,000 barrels of which 34,000,000 were exported, as shown in above table and approximately 15,000,000 were consumed in the country or put in storage.

TABLE 4

Origin of Imports of Petroleum and Its Products 1938-1939

(In Percentages)

FROM	United Kingdom	France	Germany	Italy	Turkey	Hungary	Greece	Bulgaria	Yugoslavia	Switzerland
U. S. A.	18	35	24	39	52	...	...	...	...	34
Mexico	2	..	9	1	..	...	...	...	...	..
Venezuela	38	10	44	16	..	...	...	...	...	6
Colombia	..	5	..	5	..	...	...	...	...	..
Peru	1	5	3	..	..	...	...	...	...	..
Trinidad	8	..	..	..	..	...	...	...	...	..
Total from America	67	55	80	61	52	...	...	...	...	40
Iraq	5	39	..	10	..	...	...	...	...	..
Roumania	3	3	10	20	26	100	100	100	100	30
Russia	2	1	2	..	22	...	...	...	...	..
Total from near East	10	43	12	30	48	100	100	100	100	30
Iran	20	1	4	5	..	...	...	...	...	15
D. E. I.	1	..	4	3	..	...	...	...	...	..
Total from far East	21	1	8	8	..	...	...	...	...	15
Miscellaneous	2	1	..	1	..	...	...	...	...	15
	100	100	100	100	100	100	100	100	100	100

It is estimated that the Roumanian petroleum exports in 1938 as shown on Table 3 aggregated 34,000,000 barrels. Production for this year will be close to 50,000,000 barrels of which 15,000,000 should be locally consumed, and it may be noted in Table 4 that Hungary, Greece, Bulgaria and Yugoslavia, are entirely dependent on Roumania for petroleum. The greatest additional supply which could be considered available to Germany and/or Italy will be 34,000,000 barrels from Roumania, which can be available only if the use of petroleum to nations other than Germany and Italy dependent on Roumanian oil could be eliminated or replaced by oil from Russia as to cut the demand to the 15,000,000 barrels which Roumania is now using.

Such a readjustment of supply in this general region would be a difficult and time-consuming process at any time, and certainly could not be accomplished during war without grave danger of dislocating Germany's supply of other materials from these nations, which are very important to her. Even if it could be accomplished, however, there would be only 40,000,000 barrels of Roumanian oil available to Italy and Germany, during 1940.

Transportation Difficulties

But even if assuming Germany could have all the 40,000,000 barrels of available Roumanian oil, there would remain the problem of transporting this oil to Germany by tank car, which would require an endless chain of cars loading in Roumania and unloading in Germany at the rate of more than 900 cars per day—for European tank cars have an average capacity of about 120 barrels. The distance from the fields to western Germany is about 1200 miles, or 2400 miles round trip, and tank car trains could scarcely be expected to travel more than 200 miles per day under war time conditions, so that 12 days would be required for the round trip for each car, making a minimum requirement of some 11,000 tank cars perhaps, or close to 300 trains to be in continuous operation. Even if this feat be accomplished, it may be repeated that Germany would still be 25,000,000 short of its requirements and that no provision has been made in this calculation to take care of Italy's estimated import requirements of 38,800,000 barrels for 1940.

The picture presented above does not present all the serious aspects of the situation of Italy and Germany in regard to petroleum supply for no attention has been paid to the type of petroleum products needed—a barrel of crude oil has been considered as equivalent to a barrel of any needed refined product which is manifestly not the case.

Moreover, a study of the distribution of the imports by countries during 1938 indicates that France, and Italy to a less extent, has a large refining capacity and can manufacture a considerable portion of her needed products if crude oil is available, and that Germany and Great Britain are more dependent on products already manufactured when imported. Therefore, Germany might suffer a stringent shortage of gasoline even if she could secure a crude oil supply. The maintenance of a blockade against marine shipments of gasoline to Germany, consequently, appears to be of great importance to the English-French allies.

Naturally, the amount of petroleum and petroleum products held in storage will directly affect the situation in the various countries considered above. No information is available as to the storage for military purposes but it is difficult to account for any possible appreciable source of oil stocks in sufficient quantity to alter the situation as it has been outlined for more than a few months of active warfare.

Conclusions

As the situation is now, Great Britain and France are at war with Germany, but it would be hazardous indeed to predict what will happen even in the next few days. However, the writers believe that the facts presented above support certain inferences of which the more important are as follows:

1. That a successful blockade of petroleum and its products against Germany and any active allies it may gain is one of the most effective weapons of Great Britain and France.

2. That Russia has not sufficient exportable surplus of petroleum, either on a peace or war time basis for that country, to be of much asistance in supplying Germany's needs; and that even if the Russian supply were available, difficulties of transportation appear insurmountable at least during 1940.

3. That the Roumanian fields even under complete German control, could not furnish enough petroleum for Germany's war time needs in 1940; and even if it could the transportation of such large supplies of oil from Roumania to Germany would be extremely difficult if not impossible.

4. That Italy's entrance into the war as an ally of Germany would increase Germany's petroleum supply difficulties as, if an efficient blockade is maintained against the Axis powers, Italy would have to get practically all her oil supplies from Roumania lessening by that amount the volume available for Germany; and that, under the circumstances, it is far more advantageous to Germany to have Italy as a neutral than an active ally.

As We See It . . .

SALUTE THE I. P. A. A.

GATHERING of the Independent Petroleum Association of America this week while the monopoly investigation is still underway at Washington presents something in the way of a paradox. Considering that this group is representative of more than 3500 companies engaged in producing, transporting and refining oil, it appears that monopoly has a formidable opposition. Add to this that the group includes hundreds of men of substantial wealth (acquired by ability and in the oil business) and the fact that they are militant, and monopoly is further removed. Further, it should not be overlooked that even in the refining branch where the large companies have capacity rating of around 80 percent of the total, the independent group still represents a larger business than was the entire oil industry in the United States in 1915.

A recent analysis of drilling operations in the United States shows that smaller companies and individual operators drill 72 percent of the wells, while larger units (the tabulation classed 48 companies as big ones) accounted for 28 percent. On a footage basis, the big units made 35 percent of the hole and the smaller operators 65 percent. A group of 48 "big" companies naturally includes the more substantial of the independent group, and a big percentage of the actual drilling of wells by the majors is done by contractors. Many of the latter also are independent producers in their own right. This set of figures indicates that so far as field operations go, the independents dominate.

THIS group had its beginning as an organization formed to oppose imports of oil to the detriment of the oil producers in the United States, in the early stages of the production curtailment program. In fact its organization was at a rump meeting following a conference called to foster curtailment. Having secured in part the control of imports it sought by adoption of tariff schedules, the association turned to a permanent activity in the domestic field, to the end that it has become probably the greatest economic force in the oil industry—the balance of power in maintaining the production program which the industry has adopted and is with difficulty pursuing.

Ably and conservatively led, and having available for its committee conferences some of the best minds of American industry, the association, jealously guarding the interests of its membership, and still maintaining its stand on imports, cooperates fully with other groups in the industry and governmental regulatory agencies in maintaining that portion of stability which the industry enjoys during these trying times.—J. K. R.

No Good End

IT IS regrettable that war is today the foremost product of civilization. Still this fact speaks louder than all the guns in Europe. For all the enlightenment about which men boast, destruction is today their chief objective.

Even in this country, now striving to maintain neutrality, men are moving into position to gain profit out of war. What they cannot comprehend is that destruction and profit do not walk hand in hand. The only result of war is loss.

Men anticipate profit from war because they are confused as to money and wealth. It is possible to gain money from the provision of war materials. It is difficult if not impossible to transfer this money into permanent wealth—property.

More than 20 years back this country threw itself into war and entered into what was termed a prosperous period. But a glance at the period after the war shows that wealth was added to the nation during the peace that followed war. Men drew high wages and paid high income taxes during the war. After the war they built homes, roads and automobiles.

Only the destruction of property during four years of that war explains the debacle which started in 1929. Since then the world has been paying for a war, and before completing the obligation it begins another war.

Consistent with all of industry, oil now looks to war as a period of profit. It had better look further, to the day when the bill will be presented for another war. As a part of the United States of America, the petroleum industry holds some worthless paper from the last one.—G. T.

Drilling Gains As Shutdowns and War Strengthen Markets

Decrease of completions in September reflects interruption of starting of new wells by oil field shutdowns during latter half of August

By L. J. LOGAN, Associate Editor

ALTHOUGH drilling was interrupted in September in consequence of the shutdowns of oil fields in six Mid-Continent states during the latter half of August, there was an early recovery of activity, and completions currently are running at about the same relatively high level as at this time last year.

In the week ended September 30, there were 542 well completions in the United States, or a few more than the 536 finished in the corresponding week last year; and in the week ended October 7, completions numbered 572, or practically as many as the 577 for the similar week of 1938.

New Wells Encouraged

The recovery of field work is reflected also in statistics on rigs in operation. On October 1 the rigs in use, including those actually drilling, rigging up, and temporarily shut down, totaled 3625 for the United States, compared with 3717 in operation September 1 and with 3742 on October 1 last year.

Moreover, continued good weather and strong markets for both crude and refined oils have definitely encouraged the starting of new wells; and completions likely will continue to hold up at relatively high levels during the remainder of October.

Drilling Near 1938 Level

If drilling should continue close to the 1938 curve for the rest of the year, as it has been doing in the past few weeks, this year's completions would total approximately 27,000 wells, or less than 2 percent fewer than the 27,528 completions of 1938.

That the field work in the closing months of the year may closely approximate the active development of late 1938 seems easily possible, in view of the relatively better markets in prospect. Crude prices were reduced in October, 1938, and in contrast, they have been increased in some areas in September and October, 1939, in response to better product prices.

September Results

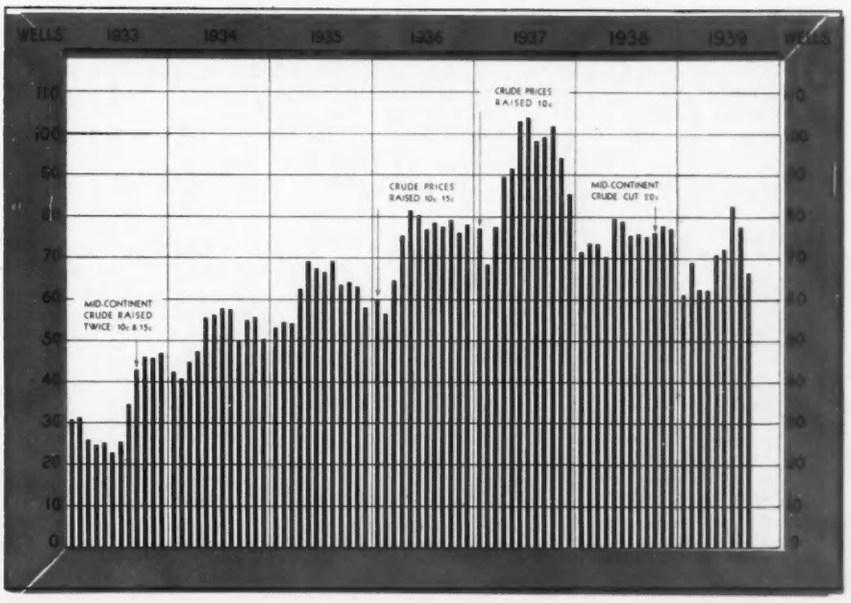
Well completions in the United States averaged 66.4 daily in September, as field work continued to reflect the unusual oil field shutdowns of the latter half of August, during which period the normal starting of new wells was interrupted.

In comparison with the September completions of 66.4 daily, there had been 77.7 daily in August and 82.8 daily in July, the peak for the year.

Because of the abnormal situation in September, completions were about 16 percent lower than in the corresponding month last year.

Presented herewith are figures showing how much drilling has

Average Number of Wells Completed Daily in U. S.
(By Months, January, 1933-September, 1939)



been done in September in each of the years from 1933 through 1939.

September of:	Average Number of Wells Completed Daily
1933	43.0
1934	50.0
1935	63.7
1936	77.7
1937	99.2
1938	75.4
1939	66.4

First Nine Months

So far this year, completions in the United States have approximately equaled those in 1936, and for the rest of the year, the 1936 results probably will be closely approximated. In 1936 there were approximately 27,000 completions.

For the first nine months of the year, from 1933 through 1939, completions have been as shown in figures presented herewith.

First 9 Months of:	Number of Wells Completed
1933	7,950
1934	13,706
1935	17,072
1936	19,864
1937	24,565
1938	20,571
1939	19,062

Some Areas More Active

Although there have been 7.3 percent fewer completions in the United States in the first nine months of 1939 than in the like period of 1938, several states and districts have shown increases.

Illinois has had more than twice as many completions this year as last year, as the development of new fields has proceeded. The state furnished 2644 new wells from January 1 to the end of September this year, compared with 1027 in the similar period last year.

Having shared to some extent in the development stimulated by Illinois discoveries, adjoining Indiana has had 162 completions this year, against 95 last year.

Michigan has had an increase in drilling rivaling that of Illinois, as the new, shallow fields of the southwestern part of the state have attracted aggressive development. Completions have totaled 1069 this year, compared with 673 up to this time last year.

More drilling in 1939 than in 1938 has occurred also in the Rocky Mountain States. Colorado and Montana have had about twice as many completions, New Mexico 18 percent more, and Wyoming 7 percent more.

In the Mid-Continent, gains in drilling over last year have occurred in Arkansas, up 10 percent; South Louisiana, up 29 percent; West Central Texas, up 36 percent; and the Corpus Christi area of South Texas, where completions have been 9 percent more numerous.

Areas other than those mentioned above have furnished fewer new wells this year than last year.

Rigs in Operation

Drilling rigs in operation October 1 totaled 3625, a number smaller than the 3717 of September 1 and 3.1 percent less than the 3742 in use October 1 last year.

The 3625 operations as of October 1 included 2468 wells actually drilling, 355 rigging up, and 802 temporarily shut down. The 3717 operations of September 1 had included 2552 wells drilling, 351 rigging up, and 814 shut down.

There were, however, more rigs in operation on October 1 than on September 1 in several states and districts. A slight increase was shown in Illinois, in further reflection of the active development of the new fields of that state. New Mexico, Wyoming, Mississippi, Missouri and Tennessee became somewhat more active during the month. Increases occurred in the Eastern States of Kentucky, New York, Ohio, Pennsylvania, and

Completions in First 9 Months 7% Under 1938 Level; Production 1% Greater

STATE OR DISTRICT	*SEPTEMBER, 1939, COMPLETIONS AND CRUDE OIL PRODUCTION						COMPLETIONS AND PRODUCTION IN FIRST 9 MONTHS, 1939 AND 1938								
							WELLS COMPLETED			DETAILS OF 1939 DRILLING				BARRELS PRODUCTION		
	Total Wells	Oil	Gas	Dry	Initial Production	Production for Sept.	1939: 9 Mo.	1938: 9 Mo.	Percent Change	Oil	Gas	Dry	Initial Production	1939: 9 Months	1938: 9 Months	Percent Change
Arkansas	18	16	1	1	5,698	1,799,600	178	161	+ 10.6	143	2	33	60,056	14,974,300	13,663,800	+ 9.6
California	92	83	...	9	69,778	18,581,800	820	1,009	— 18.7	620	5	195	524,666	168,475,300	189,542,600	—11.1
Colorado	...	...	...	...		108,600	15	6	+150.0	4	2	9	315	1,048,950	1,064,050	— 1.5
Eastern States	660	407	109	144	119,074	2,958,200	5,995	5,029	+ 19.2	3,898	911	1,186	830,063	‡26,472,200	39,993,350	....
Illinois	217	162	...	55	106,033	9,940,300	2,644	1,027	+157.5	2,073	23	548	791,073	59,639,500	.....	....
Indiana	47	26	3	18	10,880	.....	162	95	+ 70.5	58	23	81	18,780	.....	.....	....
Kentucky	64	23	13	28	1,404	.....	486	564	— 13.8	197	68	221	13,769	.....	.....	....
New York	† 57	† 55	...	2	155	.....	†430	†525	— 18.1	†386	23	21	1,394	.....	.....	....
Ohio	100	30	41	29	351	.....	690	701	— 1.6	162	345	183	2,487	.....	.....	....
Pennsylvania	†126	†101	18	7	165	.....	††1,176	††1,615	— 27.2	†954	150	72	1,581	.....	.....	....
West Virginia	49	10	34	5	86	.....	407	502	— 18.9	68	279	60	979	.....	.....	....
Kansas	‡ 89	‡ 52	5	32	154,534	3,953,200	‡995	1,260	— 21.0	‡697	38	260	1,288,699	41,982,850	44,768,600	— 6.2
Louisiana	99	65	5	29	18,380	7,546,700	777	810	— 4.1	502	28	247	161,297	69,993,300	71,030,300	— .8
North Louisiana	19	7	3	9	2,051	1,892,200	244	397	— 38.5	153	17	74	48,811	18,870,150	21,592,450	—12.6
South Louisiana	80	58	2	20	16,329	5,654,500	533	413	+ 29.2	349	11	173	112,486	51,123,150	49,437,850	+ 3.4
Michigan	134	74	31	29	27,433	2,426,100	1,069	673	+ 58.9	581	66	422	286,252	17,274,500	14,215,650	+21.5
Montana	14	10	3	1	788	508,400	100	52	+ 92.2	72	11	17	7,901	4,076,800	3,645,200	+11.8
New Mexico	54	47	2	5	19,736	2,612,700	452	381	+ 18.6	382	9	61	208,979	23,803,300	28,115,350	—15.3
Oklahoma	‡116	‡ 56	10	50	17,695	10,133,600	‡1,487	‡1,614	— 7.9	‡900	105	482	312,371	113,582,400	129,822,200	—12.5
Southeastern States	4	1	...	3	184	.....	12	16	— 25.0	2	...	10	184	.....	.....	....
Alabama	....	....	....	....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	....
Georgia	....	....	....	....	.....	.....	1	1	.....	.....	.....	1	.....	.....	.....	....
Mississippi	4	1	...	3	184	.....	11	12	— 8.3	2	...	9	184	.....	.....	....
Tennessee	....	....	....	....	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	.....	....
Texas	565	399	15	151	258,433	40,937,500	7,075	9,485	— 25.4	5,000	203	1,872	3,502,206	354,033,500	354,555,050	— 0.1
East Texas Field	16	15	...	1	56,610	11,952,500	349	1,523	— 77.0	342	...	7	1,057,217	102,367,000	114,328,250	—10.5
Rest of East Texas	27	10	3	14	1,803	2,665,000	234	376	— 37.8	96	25	113	35,797	25,025,150	25,843,800	— 3.2
North Texas	96	59	1	36	43,160	2,525,400	1,241	1,951	— 36.3	757	5	479	321,172	19,220,400	19,723,400	— 2.5
South Texas	177	117	3	57	38,533	6,809,300	2,045	2,042	+ 0.2	1,345	55	645	563,403	62,287,700	61,071,100	+ 2.0
Corpus Christi Area	99	71	3	25	29,941	.....	998	910	+ 9.6	759	35	204	448,123	.....	.....	....
Laredo Area	56	35	...	21	7,618	.....	743	770	— 3.5	450	16	277	105,011	.....	.....	....
San Antonio Area	22	11	...	11	974	.....	304	362	— 16.0	136	4	164	11,269	.....	.....	....
Texas Gulf Coast	99	76	4	19	19,662	6,845,200	1,047	1,158	— 9.6	795	41	211	214,287	58,247,600	54,512,600	+ 6.8
Texas Panhandle	32	26	4	2	9,500	1,744,200	293	440	— 33.4	221	57	15	89,653	17,351,430	18,182,400	— 4.6
West Texas	100	92	...	8	84,287	7,460,500	1,513	1,735	— 12.8	1,320	5	188	1,172,410	58,603,450	53,059,200	+10.4
West Central Texas	18	4	...	14	4,878	1,017,100	353	260	+ 35.8	124	15	214	47,267	7,298,650	7,833,800	— 6.8
Utah	....	....	....	....	.....	.....	.....	3	.....	.....	.....	.....	.....	.....	.....	....
Wyoming	13	11	2	...	20,191	1,958,200	87	71	+ 7.1	63	4	20	69,359	16,144,650	14,419,850	+12.0
Total United States	1,858	1,221	183	454	712,374	102,497,800	19,062	20,571	— 7.3	12,864	1,384	4,814	7,364,650	913,904,750	904,836,150	+ 1.0

* September completions cover not the calendar month, but the 4 weeks, or 28 days, ended September 23.
† Includes water-input and pressure wells.
‡ Includes salt-water disposal wells.
‡‡ Does not include Illinois.

West Virginia, because of the pronounced improvement lately in the markets for Pennsylvania grade crude, that oil having encountered strong demand in response to sharp advances in prices of lubricants. In the Mid-Continent, more wells were under way on October 1 than on September 1 in Arkansas, Oklahoma, and several districts of Texas, including North Texas, Eastern Texas, and Southwest Texas, those gains having reflected further recovery of field work to normal proportions, following the shutdowns of the latter half of August.

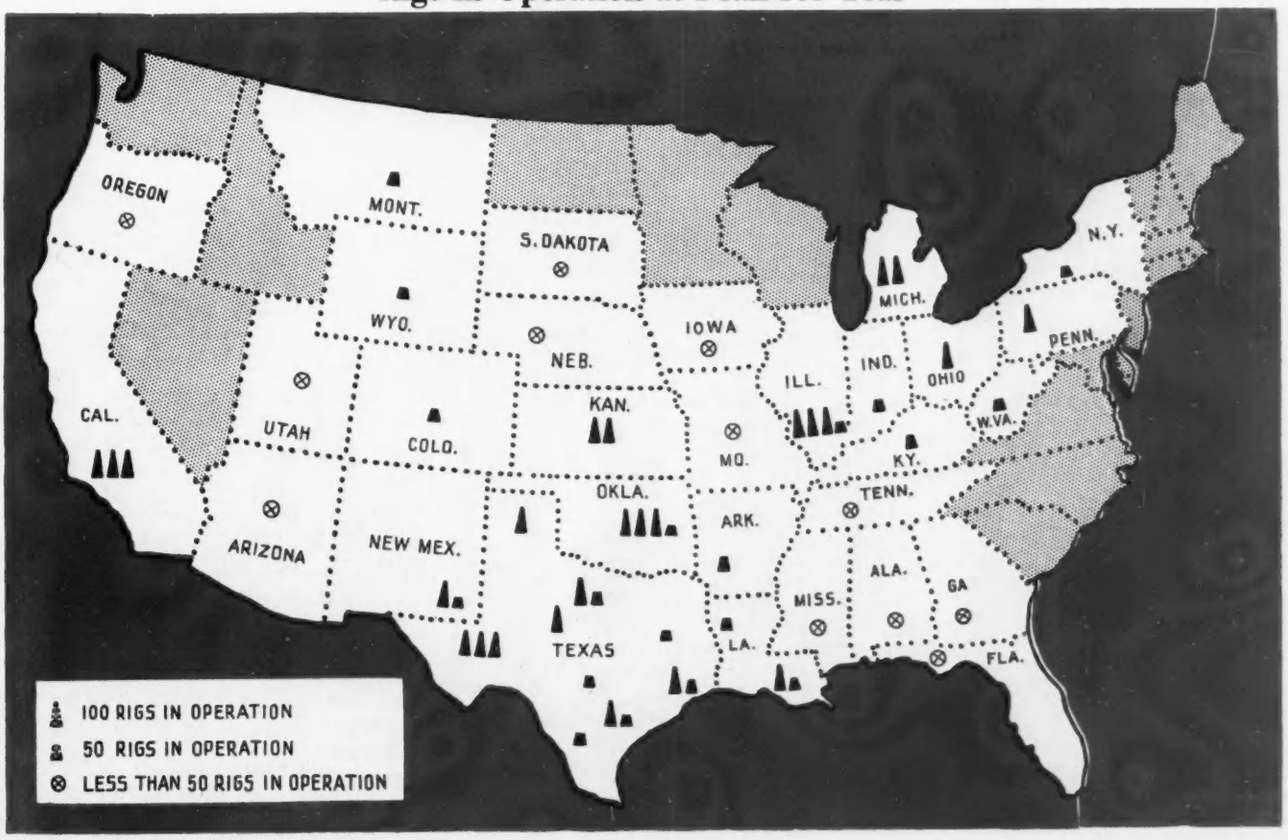
In Illinois there were at the beginning of October 355 rigs in operation, including 164 wells drilling, 51 rigging up, and 140 shut down, the new fields of the state having accounted for 233 operations, of which 110 were wells drilling, 39 rigging up, and 84 shut down. The 355 active tests for the state on October 1 compared with 350 on September 1.

Areas that had fewer operations October 1 than September 1 included California, Colorado, Montana, Indiana, Michigan, Kansas, North Louisiana, South Louisiana, the Texas Gulf Coast, the Texas Panhandle, West Texas, and West Central Texas.

Number of Drilling Rigs in Use Nearly as Great as Year Ago

STATE OR DISTRICT	TOTAL RIGS IN OPERATION (Drilling, Rigs Up Shut-Down)				DETAILS OF OCTOBER 1, 1939 DRILLING ACTIVITY					
					Rigs in Operation			Prelim. Activity		
	Oct. 1 1939	Sept. 1 1939	Oct. 1 1938	Percent Change from Year Ago	Drilling	Rigs Up	Shut-down	Derricks	Locations	Total Operations
Arizona	8	8	....	.....	5	...	3	...	5	13
Arkansas	36	30	52	— 30.8	29	2	5	5	2	43
California	325	331	376	— 13.6	213	66	46	33	37	395
Colorado	27	28	26	+ 3.8	18	...	9	...	...	27
Eastern States	862	841	863	— 0.1	444	110	308	121	119	1,102
Illinois	355	350	266	+ 33.4	164	51	140	76	74	505
New Fields	233	230	193	+ 20.7	110	39	84	61	51	345
Rest of Illinois	122	120	73	+ 80.8	54	12	56	15	23	160
Indiana	62	65	52	+ 19.3	43	5	14	5	15	82
Kentucky	73	69	79	— 7.6	37	5	31	8	9	90
New York	57	55	90	— 36.6	22	12	23	6	5	68
Ohio	121	113	143	— 15.4	67	15	39	5	4	130
Pennsylvania	124	122	119	+ 4.2	63	12	49	12	9	145
West Virginia	70	67	114	— 38.6	51	7	12	9	3	82
Iowa	1	....	....	.....	1	...	...	...	...	1
Kansas	193	242	211	— 8.5	136	27	30	14	11	218
Louisiana	192	207	213	— 9.9	156	12	24	18	54	264
North Louisiana	59	73	89	— 33.6	42	1	16	12	2	73
South Louisiana	133	134	124	+ 7.2	114	11	8	6	52	191
ichigan	200	226	183	+ 8.5	143	26	31	...	61	261
Missouri	22	19	....	.....	10	2	10	1	3	26
Montana	31	45	44	— 29.6	23		8	...	...	31
Nebraska	1	2	4	— 75.0	1	...	...	...	...	1
New Mexico	158	154	128	+ 23.4	124	5	29	...	20	178
Oklahoma	334	332	359	— 7.0	242	31	61	33	17	384
Oregon	1	1	....	.....	1	...	...	...	...	1
Southeastern States	24	17	18	+ 33.3	....	....	....	....	....	....
Alabama	4	4	4	.....	.....	...	4	...	...	4
Florida	4	3	4	.....	.....	...	4	1	...	5
Georgia	1	1	....	.....	.....	...	1	...	...	1
Mississippi	15	9	10	+ 50.0	4	3	8	1	...	16
Tennessee	9	1	....	.....	7	1	1	...	...	9
Texas	1,130	1,156	1,201	— 5.9	875	68	186	70	328	1,528
East Texas Field	18	15	45	— 60.0	12	2	4	6	5	29
East Texas Border Counties	14	11	18	— 22.2	6	3	5	2	1	17
Rest of East Texas	43	36	48	— 10.4	29	3	11	8	4	55
North Texas	174	170	148	+ 17.5	129	6	39	10	62	246
South Texas	287	260	305	— 5.9	226	23	38	19	58	394
Corpus Christi Area	161	142	143	+ 12.6	136	12	13	9	35	235
Laredo Area	66	60	82	— 19.5	48	6	12	5	15	86
San Antonio Area	60	58	80	— 25.0	42	5	13	5	8	73
Texas Gulf Coast	125	147	143	— 12.6	121	1	3	16	78	209
Texas Panhandle	94	101	102	— 7.8	72	8	14	1	12	107
West Texas	295	332	318	— 7.2	235	14	46	8	82	385
West Central Texas	80	84	74	+ 8.1	46	8	26	...	18	98
Utah	2	3	3	— 33.3	2	...	...	...	...	2
Wyoming	69	64	61	+ 13.1	30	5	34	...	...	69
Total United States	3,625	3,717	3,742	— 3.1	2,468	355	802	320	707	4,652

Rigs in Operation at Peak for Year



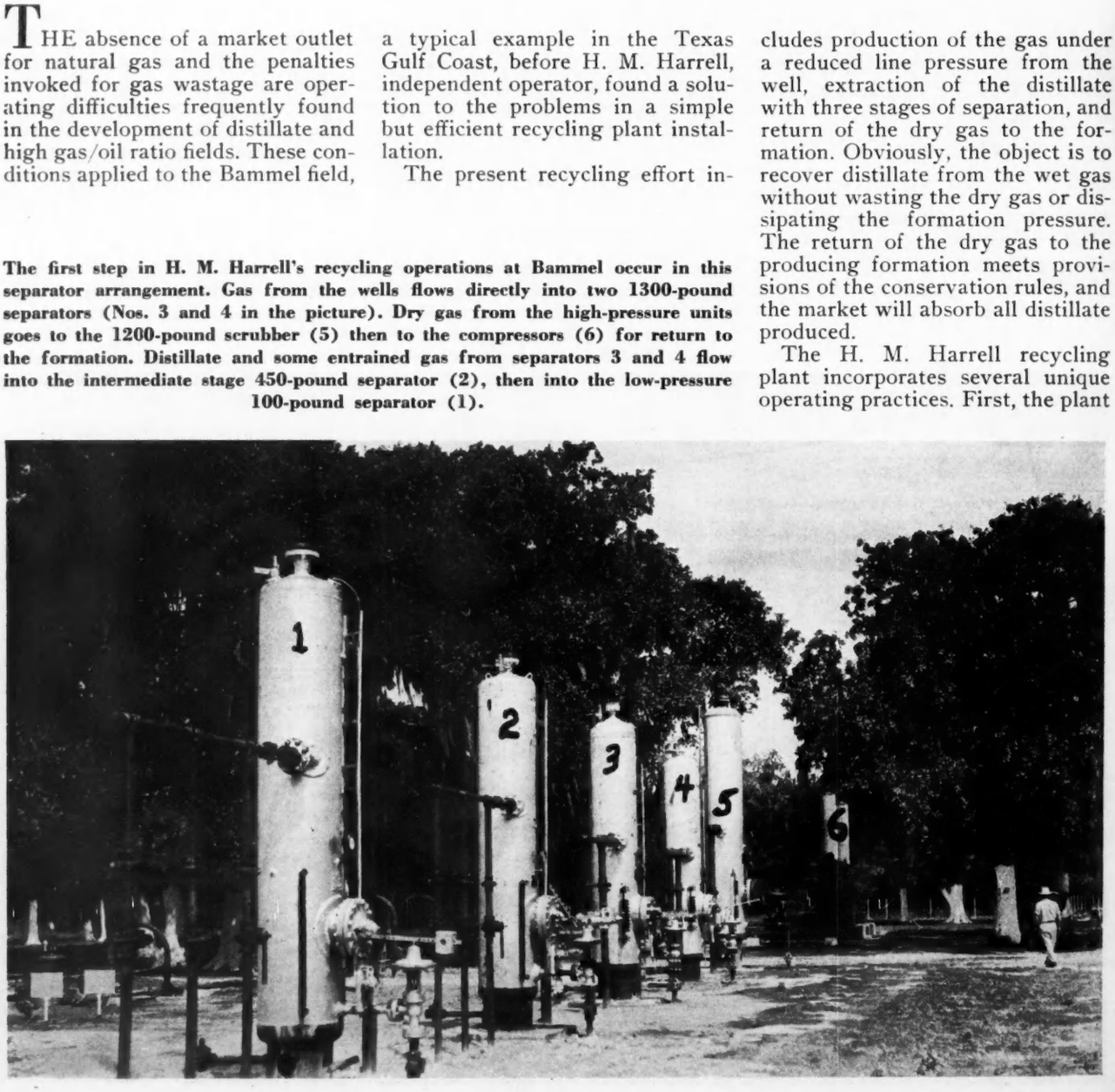
Simple Recycling Plant Solves Problem in Distillate Field

By BRAD MILLS, Associate Editor

THE absence of a market outlet for natural gas and the penalties invoked for gas wastage are operating difficulties frequently found in the development of distillate and high gas/oil ratio fields. These conditions applied to the Bammel field, a typical example in the Texas Gulf Coast, before H. M. Harrell, independent operator, found a solution to the problems in a simple but efficient recycling plant installation.

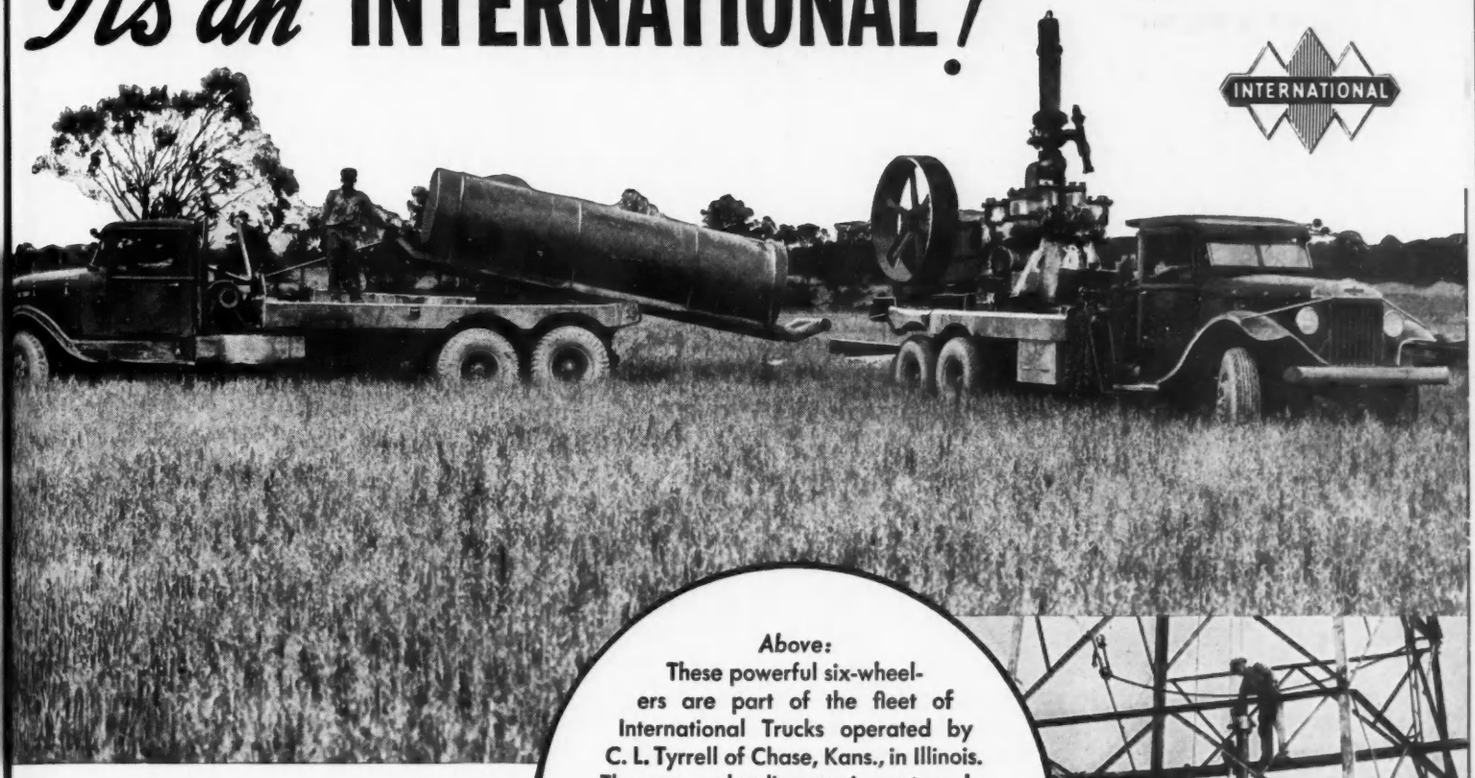
The present recycling effort includes production of the gas under a reduced line pressure from the well, extraction of the distillate with three stages of separation, and return of the dry gas to the formation. Obviously, the object is to recover distillate from the wet gas without wasting the dry gas or dissipating the formation pressure. The return of the dry gas to the producing formation meets provisions of the conservation rules, and the market will absorb all distillate produced.

The H. M. Harrell recycling plant incorporates several unique operating practices. First, the plant



The first step in H. M. Harrell's recycling operations at Bammel occur in this separator arrangement. Gas from the wells flows directly into two 1300-pound separators (Nos. 3 and 4 in the picture). Dry gas from the high-pressure units goes to the 1200-pound scrubber (5) then to the compressors (6) for return to the formation. Distillate and some entrained gas from separators 3 and 4 flow into the intermediate stage 450-pound separator (2), then into the low-pressure 100-pound separator (1).

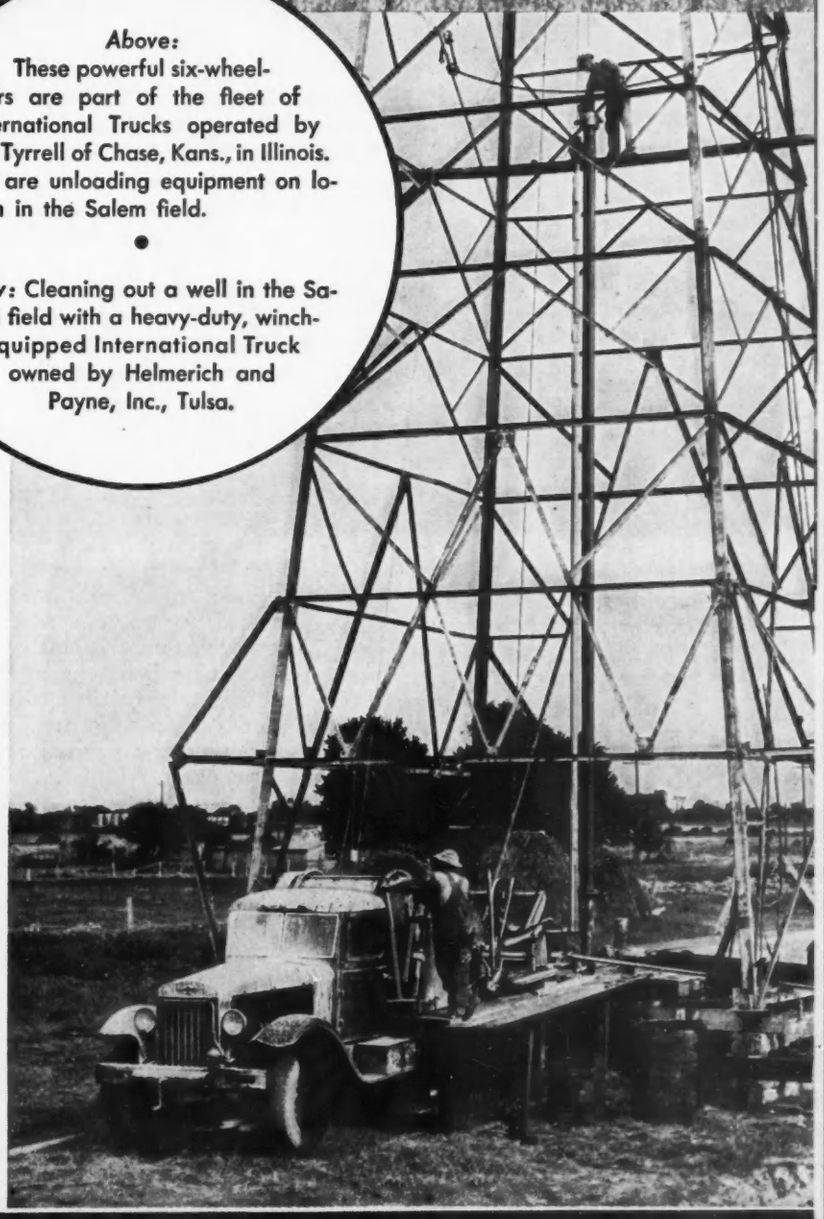
"It's an INTERNATIONAL!"



Above: These powerful six-wheelers are part of the fleet of International Trucks operated by C. L. Tyrrell of Chase, Kans., in Illinois. They are unloading equipment on location in the Salem field.

•

Below: Cleaning out a well in the Salem field with a heavy-duty, winch-equipped International Truck owned by Helmerich and Payne, Inc., Tulsa.



hirty-three years ago a bold name appeared on ioneer truck. It was the first INTERNATIONAL, med for International Harvester. The name s mainly *pledge* and *promise* then. Now it is greatest name in trucks. Wherever loads are uled today, in the remote corners of the world just around the corner from you, truck men proud to say, "It's an International."

A third of a century of "fixed idea" has brought this out—33 years of Harvester determination to provide ck transportation at the lowest possible cost for any n with loads to haul.

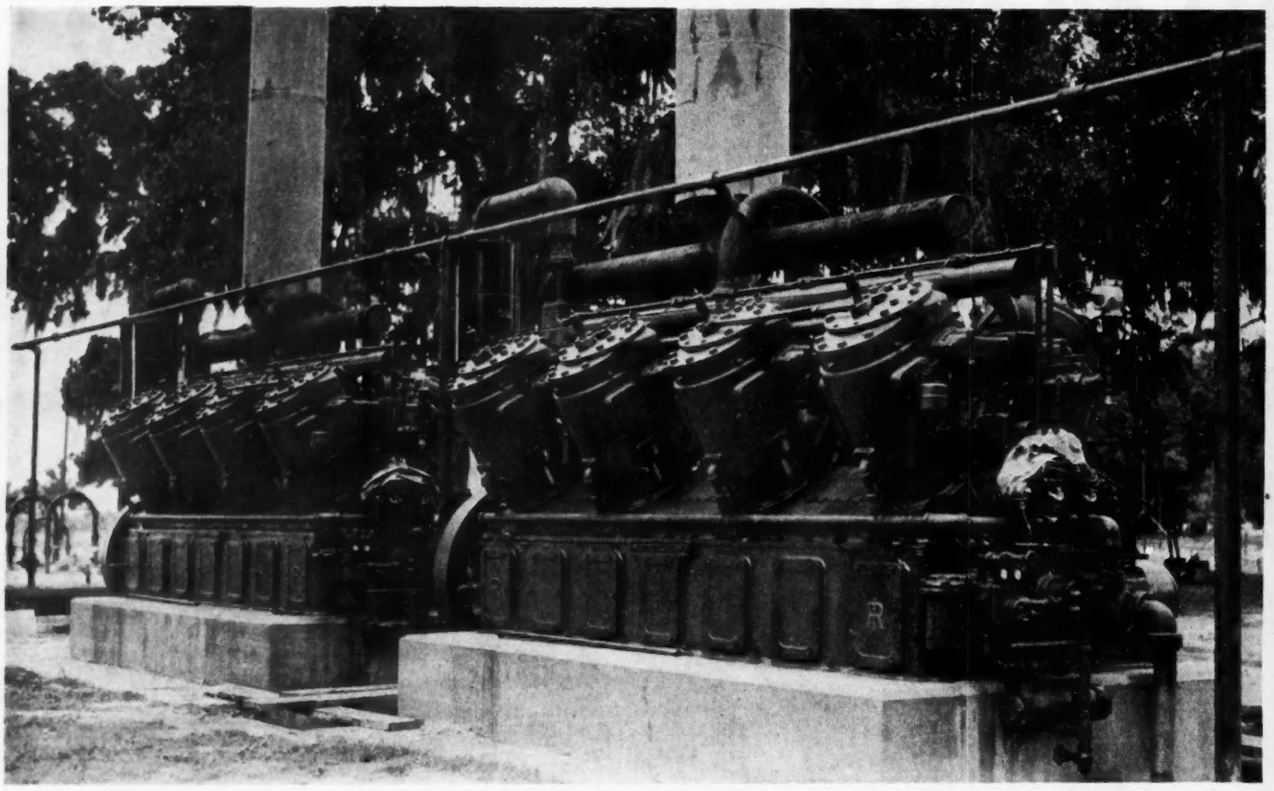
International's 242 Company-owned branches with eir factory-service facilities, and the thousands of ser-e-trained dealers, have played a vital part in the ternational Truck reputation of today. *Truck quality ervice readiness.* These make International *perform-nce and economy,* and that is the substance of truck wnership.

And it's this unequaled performance and economy at sells more heavy-duty Internationals than *any her three makes combined.*

Fit Internationals to *your* hauling problems. Sizes nge from Half-Ton Pickups to powerful 6-Wheelers. ny International Dealer or Branch will give you the mes of International owners you know. These own-s will tell you, first-hand, the kind of performance ey are getting, and the kind you can expect from ternational Trucks.

INTERNATIONAL HARVESTER COMPANY
(INCORPORATED)
80 North Michigan Avenue Chicago, Illinois

INTERNATIONAL TRUCKS



These two 8-cylinder 300-horsepower compressors at present are boosting the pressure on 13½ million cubic feet of gas daily from 1200 to 2550 pounds. Three additional compressors are being installed.

was built without a blueprint, and only such workmen as drillers, derrick men and roughnecks were employed during its construction. The concrete, steel and tank work was planned and completed by Harrell's own drilling and lease crews, under direction of a superintendent.

Plant Equipment

The plant consists essentially of two high-pressure separators, an intermediate separator, a low-pressure separator, a high-pressure gas scrubber, and two 8-cylinder compressors. Auxiliary equipment includes late type safety, regulator and measuring devices.

The Bammel field is primarily a distillate producing area, the Cockfield sand at about 6200 feet being the source of production. The discovery well was completed in March, 1937, and since that time a large gas reserve has been developed. On potential tests the wells show a high volume and a nominal pressure.

Six gas wells are included in the recycling project, five being producers and one an injection well. All wells were completed with the casing set through the producing zone, gun perforators having been used opposite the best indicated producing levels. The producing wells were completed with 24 perforations each, while casing in the injection well was perforated with 100 shots. The producing zone is comparatively thin.

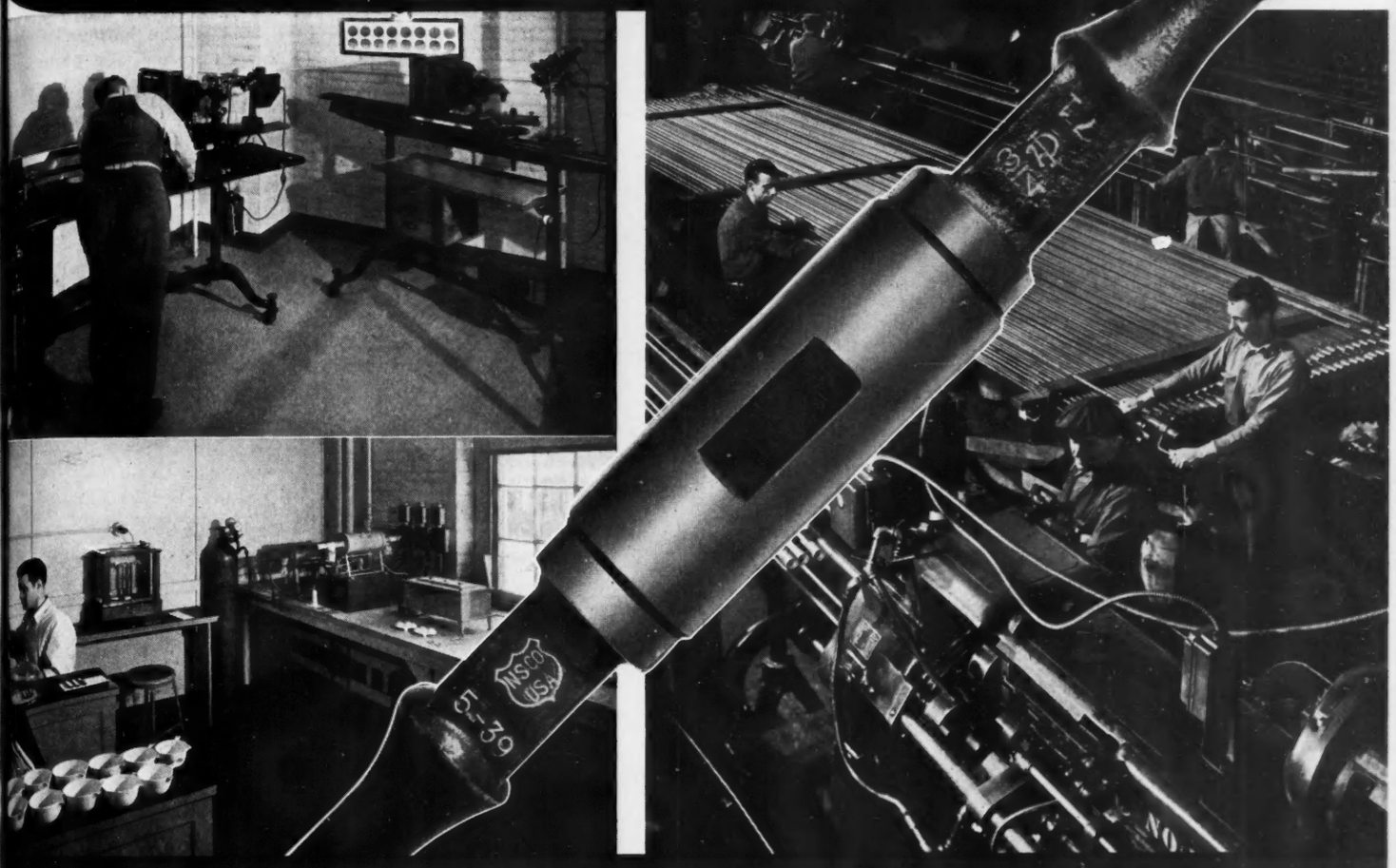
Although the bottom-hole pressure is around 2450 pounds per square inch, the line pressure from the wells is regulated sharply downward. Bottom-hole chokes are used to prevent freezing and to serve as an efficient control on line pressure from the wells. The recycling plant, the producing wells and the injection well are balanced to give the desired pressure from the wells.

Gas comes from the wells at a line pressure of 1200 pounds, the two high-pressure separators receiving the gas directly at line pressure. The dry gas from the high-pressure separators goes direct to the scrubber at a pressure only slightly less than 1200 pounds, while the distillate and some entrained gas is dumped from the bottom of the separators into the intermediate stage separator, operating at a pressure of 450 pounds. The distillate is dumped from the intermediate stage separator into the low-pressure separator, which operates at a pressure of 100 pounds.

The distillate finally passes from the low-pressure separator to the storage tanks. Some dry gas is recovered from both the intermediate and low-pressure separators, but it is used for lease and domestic requirements. The scrubber, operating at the discharge pressure of the high-pressure separators, receives dry gas only from the high-pressure regulators. The dry gas is picked up from the scrubber by the compressors and returned to the formation at a pressure of about 2550 pounds. The discharge of distillate from each separator in series simply becomes the intake for the next lower pressure separator, with the storage tanks finally receiving the distillate at atmosphere. The high-pressure separators do most of the work, but some distillate is added or picked up by each of the lower pressure separators.

The plant is now handling about 13½ million cubic feet daily, a capacity volume for present equipment. Gas comes from the wells at a temperature of 65° F. and is discharged by the compressors at a temperature of 225° F. to 240° F. The greatest drop in pressure is between the high- and intermediate-pressure separators, and fluctuations in temperature of gas from

What *Testing* and *Inspection* means to NATIONAL SUCKER ROD USERS



TRUE SPECIFICATIONS

FROM the casting of the ingots at the steel mill to the final shipment of the finished product National Sucker and Pull Rods are subject to rigid inspection and testing at every stage. What does this extreme care mean to the rod user? It renders certain the most complete practical elimination of defects and assures that the rods will be uniform and true to specifications. In the final analysis these things mean lower lifting costs.

GRADES OF NATIONAL SUCKER RODS

FOR NON-CORROSIVE WELLS:

Grade 14 for light loads.
Grade 30 for medium and average loads.
Grade 40 for heavy loads.
Grade 50 for very heavy loads.

FOR CORROSIVE WELLS:

Grade 71 for heavy loads where corrosion is moderate, but sulphides not severe.
Grade 81 for heavy loads where corrosion is bad, but sulphides not severe.
Grade 91 for heavy loads under severe corrosive and sulphide conditions.

NATIONAL

THE NATIONAL SUPPLY COMPANY

EXECUTIVE OFFICES: PITTSBURGH, PA.
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Novel arrangement for handling contraction and expansion of the discharge line from the compressors. A short section of sucker rod is embedded in a concrete block. A small square of steel plate is spot welded to the bottom of the discharge line as a shoe, the plate sliding back and forth across the sucker rod section.

the wells indicated that freezing might be expected when handling gas from the wells with a temperature as low as 50° F. A line will be run from the compressor discharge line to the intake line from the well, to prevent freezing in cold weather. The arrangement will pass enough hot gas into the intake line to raise the temperature of the incoming gas to summer temperature.

In building the plant, equipment was used much heavier than that required to meet nominal operating standards. Piping and connections are capable of handling about twice their present operating pressures.

Two 8-cylinder compressors are handling the dry gas and increasing its pressure from at about 1300 pounds to 2550 pounds in a single compression stage. The power cylinders are each 11 x 12, while the compressor cylinders are 2¾ x 12. Only three compressor cylinders are used on each compressor, since the large volume of gas handled and the sharp increase in pressure require more than the full power rating of the power ends when three cylinders are used. The compressors are rated at 300 horsepower each, and have a maximum operating speed of 350 r.p.m. They are now functioning satisfactorily at full rated capacity.

Expansion of the discharge line from the compressor is handled by a novel supporting arrangement. Concrete foundations from two to three feet long are provided, a short section of ordinary sucker rod being half embedded in the surface or top of the concrete block. A small square of steel plate is spot welded to the discharge line as a shoe, the plate sliding back and forth across the embedded sucker rod as the line contracts and expands.

Cooling System

Cooling water for the compressors is provided by two earthern reservoirs holding 30,000 barrels. A 10-horsepower electric pump is used for spraying water over the heat exchangers. The cooling system for the compressors is a closed circuit, the water being circulated by small pumps built onto the compressors. The flow is through the heat exchangers or coils located over the open reservoir and back to the compressors, the spraying of water over the coils bringing about an adequate reduction in the temperature of the circulated water. The coils built into the circuit simply act as a cooling medium that might be compared to a radiator on an automobile. Water sprayed on the coils is picked up by the electric pump on the opposite side of the outer or second reservoir, the gradual flow of warmer water from the inner reservoir not being enough to appreciably raise the temperature of the second reservoir. A water well furnishes an ample water supply, gas being used to jet the water to the reservoirs.

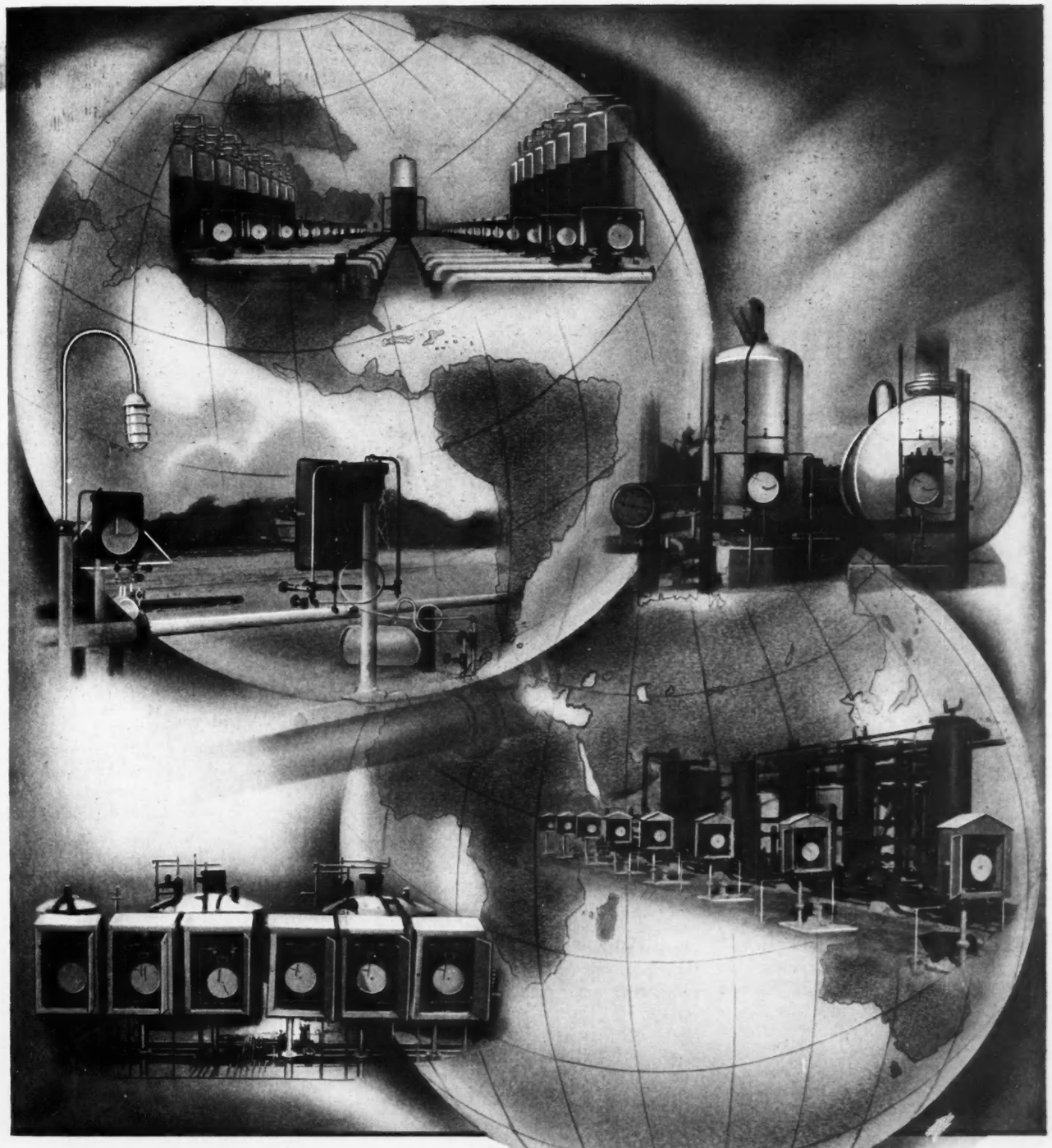
The two compressors are the first units of five that will be ready for operation before the end of the year. Three additional compressors have been ordered, and the present capacity of the plant will be more than doubled. The entire plant will be housed before arrival of the rainy season.

Construction on the present plant was started in May and the first gas was processed July 3, 1939. The plant ran without a shutdown of any kind until 7 a. m. August 15, the hour designated for a general shutdown by the railroad commission.

Several line pressures from the wells to the high-pressure separators have been used. Intake pressures of 900, 1000, 1100, 1200 and 1300 pounds have been used, and a careful record of distillate recovery at each intake pressure observed. When the five compressors are operated, it is possible that the increased capacity will permit operation at an intake pressure that will give maximum distillate recovery. The present well line pressure of 1200 pounds and discharge pressure of 2550 pounds gives a high distillate recovery almost as high per thousand feet of gas handled as a slightly lower intake pressure. The increased volume handled more than offsets any difference. No gas has been wasted at any operating pressure.

The distillate recovery has ranged from 18 to 20 barrels per million cubic feet, or around 8/10 gallon per thousand.

Gas has been injected into the formation through tubing, but recent injection through both tubing and 7-inch casing has considerably reduced friction loss.



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Attention to Little Things Spells Efficiency in Pumping

Pumping Series Article No. 23

The feel of the experienced pumper often spots and prescribes for trouble promptly. . . . His role as a diagnostician of production ailments is important

By FRANK B. TAYLOR,
Staff Writer

THERE is much more to pumping a lease than merely seeing to it that the wells are producing. Lead lines may be discharging into lease storage, jacks and beams may be rising and falling, rod lines or unit lifts may be operating satisfactorily; but this does not prove a pumping lease is being operated with greatest efficiency. Little things that go unnoticed to the casual eye more truthfully indicate how efficiently a lease is being run than do the more visual signs of operation.

There are "tricks of the trade" in pumping, just as there are in welding or in any other skilled labor. These tricks and short cuts to good pumping are only attained by experience; are deep mysteries to the new man. The pumper makes use of this type of knowledge every day.

Few trips are made around the lease without his finding an answer to some operating question by a means that would escape the notice of an uninitiated companion. It becomes habit with old pumpers; a constant, sub-conscious check of lease operation. And when a test of some kind must be made, the pumper often finds the correct answer without the aid of instruments or pulling machine. More often than not a detailed investigation will prove the pumper's insight correct.

Here's a well pumping from 1450 feet, making the best oil from the lease. Something is wrong, but the pumper is satisfied the well is filling and that valves are okay. Pulling a sample from the lead line, the oil proves to be clean; no water, emulsion or b.s. Cutting the well off the band-wheel power the pumper opened the bleed-off at the well head and placed his hand over it. The air was sucked in through his fingers and against the palm of his hand he could feel a suction into the well. He went through the same routine, this time paying particular attention to the approximate volume of air entering the tubing of the well. After so much air had entered the tubing, the suction on his hand went to zero.

Putting the well back on the power the pumper figured it took something like 30 minutes before production started through the lead line. That was the time required for the pump to fill up the tubing. On reporting in to the office he told them to send a crew for a tubing job, that there was a leak a third of the way down.

When about 320 feet of tubing had been pulled and laid down the next joint came apart below a collar as the crew was breaking it.

The pumper's first indication of trouble came when he noticed production into lease storage was down a little below what it should have been. Being suspicious of a particular well he checked it as related. When the power had been cut off, the oil filled the tubing but immediately started to recede. This placed a suction against his hand when he covered the opened bleeder. By this the pumper knew that pump trouble was unlikely, but that most probably his difficulty was either in standing valve or leaking tubing.

The first alternate was discarded when the suction continued only for a limited time, not long enough for the fluid column to return completely to the pay sand. This was checked against a 30-minute fill-up with the pump, compared with about 2 hours fill-up time if the entire tubing string had been drained. His conclusion was that the fluid in the tubing drained back only part way, then stopped. This indicated a tubing leak somewhere in the upper third of the string.

On the other hand, if the tubing fluid had drained completely to the pay, either the standing valve was failing to hold or there was a leak in the tubing string. As the valve generally causes more trouble, he would have been inclined to believe the valve was bad.

Just what might a "gurgle" mean at the bleeder? John Pumper thinks

just about anything, with certain important reservations. In the first place, it may mean that the well is pumped off. That is always the most probable assumption to work from. However, if the well regularly should produce during its period on the power or throughout the entire day, then it would be more logical to believe there was pump trouble; bad cups, balls and seat; or possibly a tubing hole that was thieving all the production. Here experience and knowledge of the particular well is needed. If new tubing had been recently run, if tubing was in a corrosive well, if the pump had been recently overhauled, if the fluid level was normally low . . . all these would aid in a field diagnosis of probable cause of pumping failure. In addition, there might be other indications to help the pumper draw a conclusion.

The pull rod under the hand of an experienced pumper becomes a scientific instrument. Of all things on a lease, the pull rod tells him more about how his wells are actually operating. When the rod movement is regular; smooth, jerkless, the well is "easy." It is pumping steadily.

As a sidelight it is a safety measure to leave the hand flat on the rod rather than curve the fingers around the rod in a grip. If for any reason at all the pumper has to let go of the rod quickly, he has no grip to relax if his fingers are straight.

By placing the hand flat on a pull rod and putting some weight on the hand, the pumper "feels" his well. The "pound" of the pump is very apparent. It does not actually make the rod line vibrate, but does impress a vibration on the rod that is detected through the hand. "Pound" is not present in a well having a high fluid level and no pump trouble.

There are two ordinary causes of pump pound. The most frequent of these is a fluid level so low that the pump receives only a partial load each stroke. On a well that regularly pumps off, there is in most cases sufficient fluid for normal pump action when the well is first connected to the power. Sometime later the fluid level is lowered until the pump is barely submerged, and only a partial fill-up is obtained. This can be felt on the rod line, and as the level of the fluid is continually lowered, the pumper can quite accurately judge how much fluid is being lifted, how much longer before the well will pump off, and to what extent the pump is filling.

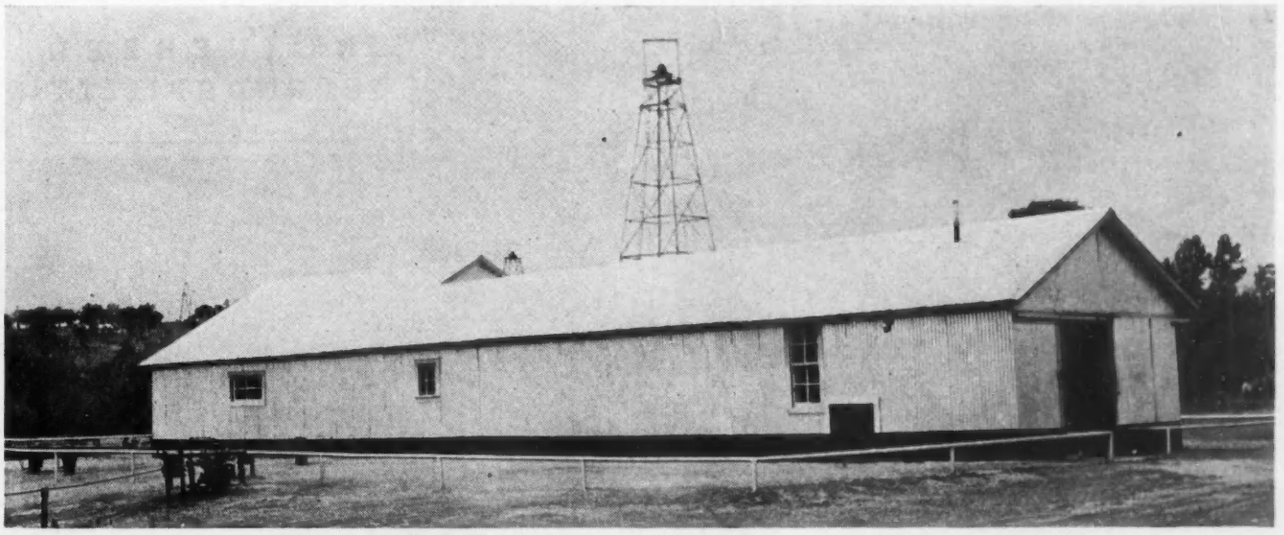
When the pump first starts to fill incompletely, the pound is near the power end on the rod line stroke. This pound feels like a quick jar of the rod line, and as a matter of fact it is, for the stroke of the plunger is momentarily interrupted when it strikes the top of the fluid. Gradually, if the well continues to produce, the point at which the pound takes place relative to the stroke will travel toward the well end of the rod line stroke. This follows the continued lowering of the fluid level and continual decrease of each pump charge. The volumes being lifted are judged on the basis of the portion of the stroke actually effective in lifting fluid. The speed at which the fluid level is reduced indicates how much time would be required to pump the well off.

The second cause of pump pound is sanding, while a possible but seldom experienced third is due to cavings not entering the pump valves but blocking entrance of oil into the pump chamber. When a well sands itself, the pound starts at the bottom of the stroke, and may build up either gradually or quickly. It may be present with either a hole full of fluid as when a well is first connected or may not show until the well is pumped down. If present, the sand pound is more definite than the fluid pound. The jar is harder, more intense and without the cushioning effect of fluid.

At the power of a bandwheel setup the pumper can rather closely judge the balance through the eccentric. If the eccentric rotates smoothly, without drag on any side, then the pulling positions and loads of the rod lines are well matched. If the eccentric slows through part of its revolution, this is evidence of too much pull on one side. Under uniform conditions even spacing of wells about the eccentric will give uniformity of load. In cases where well depth varies, or load varies considerably in different wells, this must be taken into account in their spacing on the eccentric.

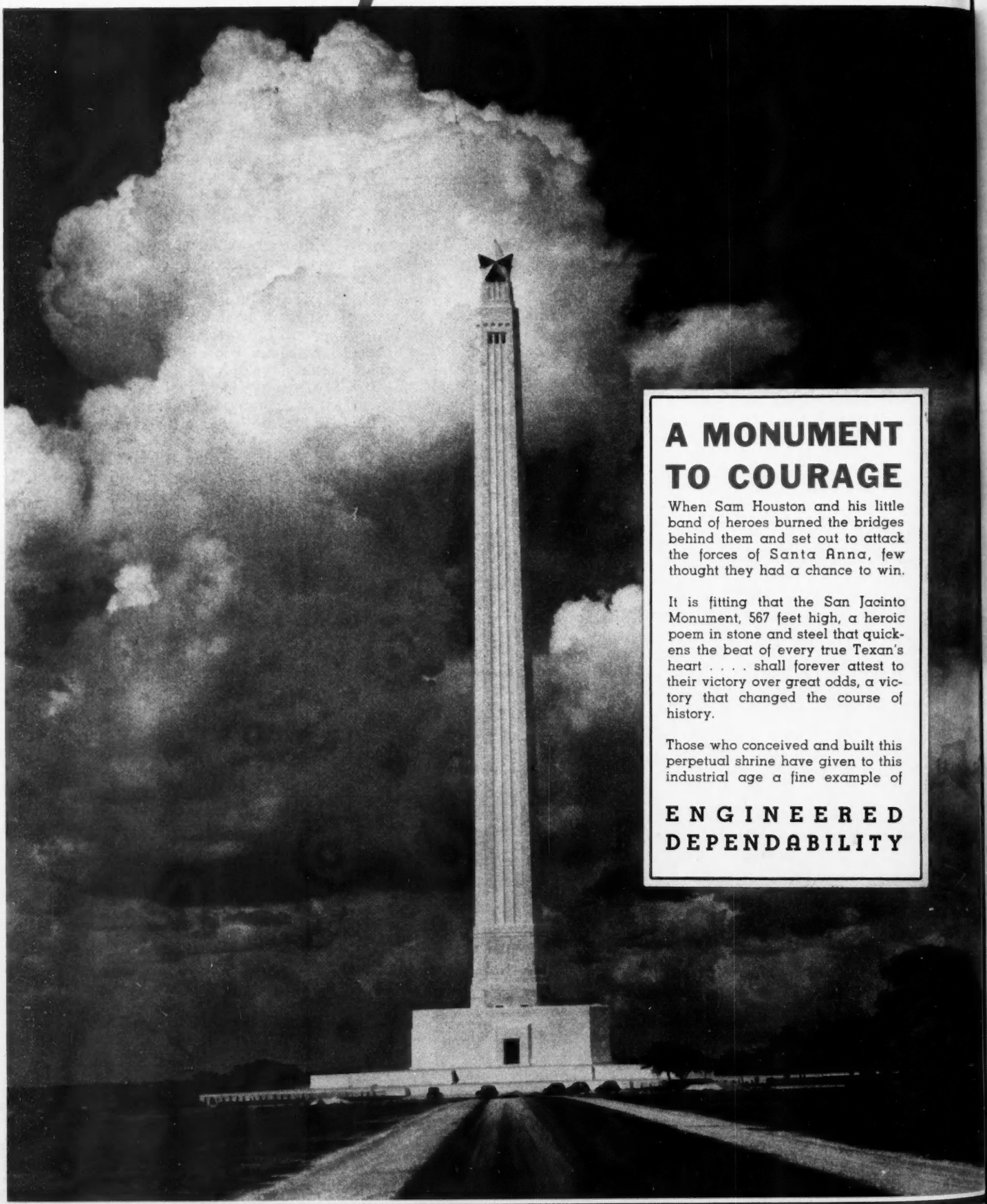
Infrequently, the power may

Nerve Center of the Pumping Lease



The central power is the nerve center of the lease, with each rod line's individual nerve keeping the pumper informed as to the general condition and producing capacity of each well.

Engineered



A MONUMENT TO COURAGE

When Sam Houston and his little band of heroes burned the bridges behind them and set out to attack the forces of Santa Anna, few thought they had a chance to win.

It is fitting that the San Jacinto Monument, 567 feet high, a heroic poem in stone and steel that quickens the beat of every true Texan's heart . . . . shall forever attest to their victory over great odds, a victory that changed the course of history.

Those who conceived and built this perpetual shrine have given to this industrial age a fine example of

ENGINEERED DEPENDABILITY

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REED ROCK BITS

A MONUMENT TO COURAGE...

IN THE MANUFACTURING OF OIL FIELD EQUIPMENT

When the Reed Roller Bit Company pioneered anti-friction bearings for rock bits, it was the accepted opinion of all bearing engineers that such roller and ball bearings would not stand up under conditions that obtain in a rotary drilling well.

The reward for indomitable persistence in the face of that opinion, was the accomplishment of the greatest advance in rock bit cutter design since rock bits were first introduced.

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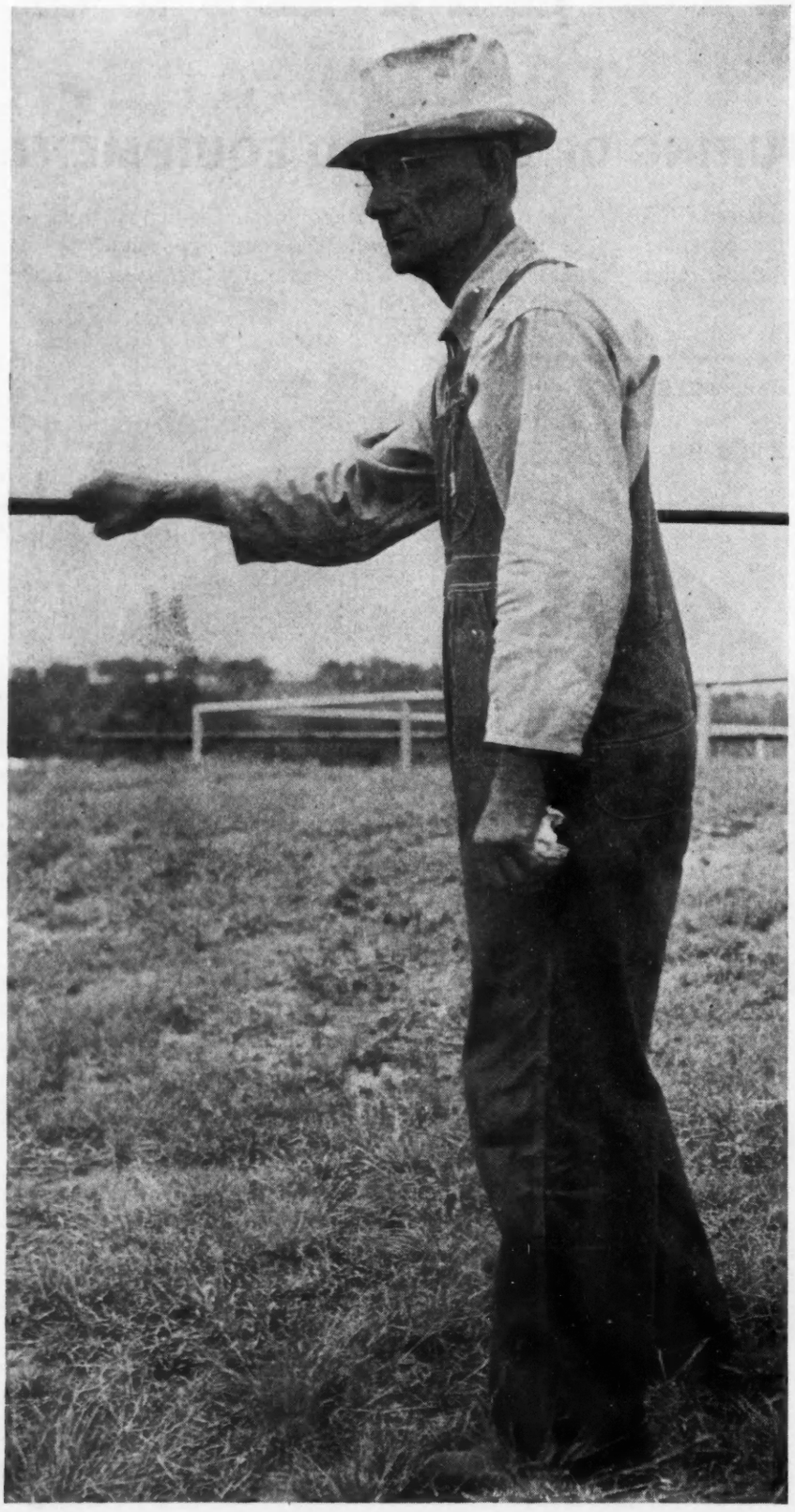
BIT COMPANY

lope through part of its delivery, drag through the remainder. This is more true on an engine overloaded than on one having a surplus of reserve power. Not infrequently the belt driving the eccentric will assume a different line of travel with a change in power delivery. Consequently, if a power load varies, the belt may ride low during the minimum pull and high during the maximum. This not only reduces belt life but subjects the entire power setup to undue stress.

Taking Her Pulse



The pulse of the pumping well is detected in the rod line. To the pumper the "feel" of his rod lines tells more than the most accurate scientific instruments.

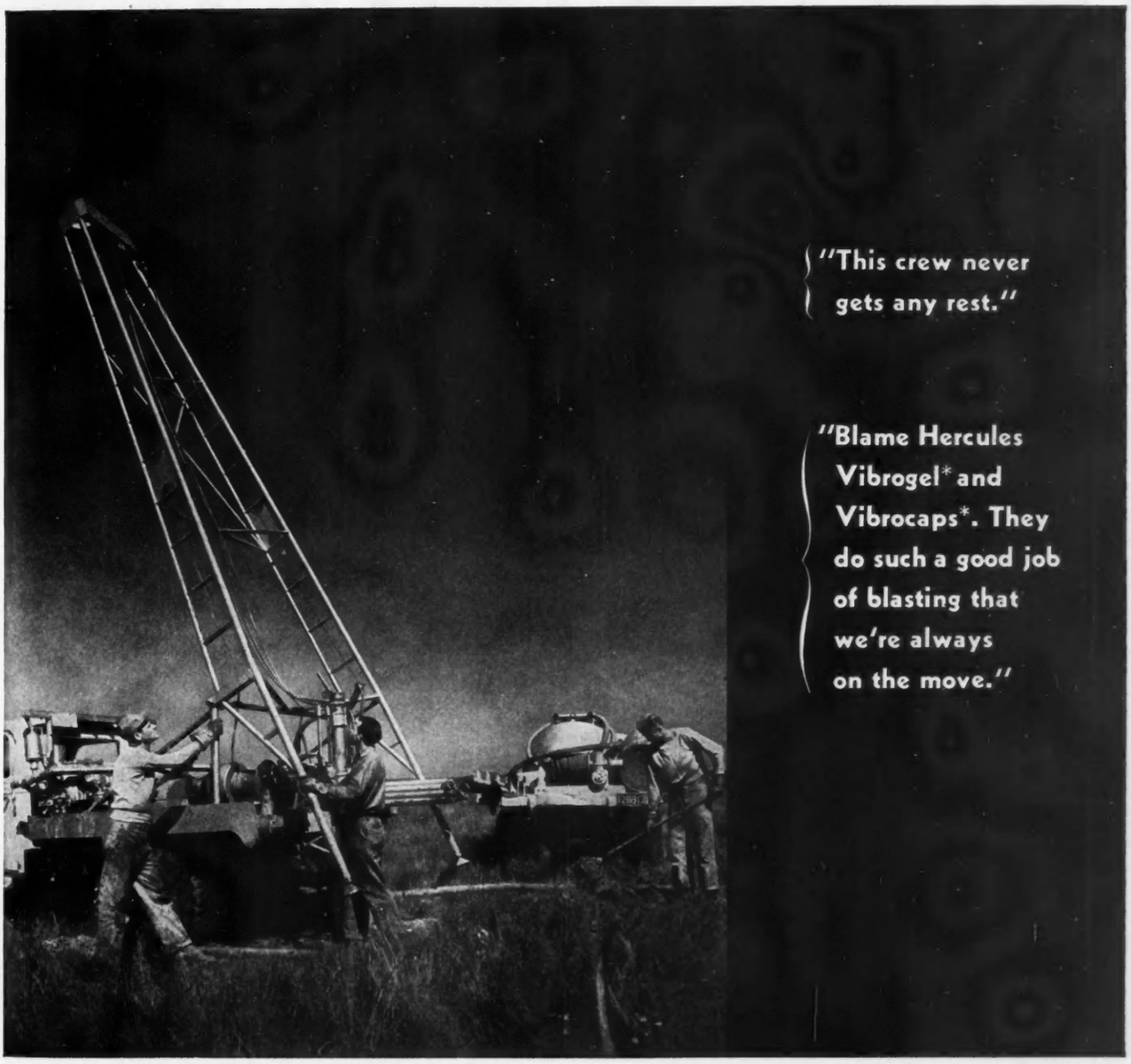
At the stock tanks the experienced pumper can often tell if one well is down, and tell which well it is. This he does by knowing the number of inches of production to be expected from the lease as a whole and approximately how much each well should be producing. If one well should make seven inches into lease storage in a given time, then if the storage is down by that amount, he concludes that well to be not pumping. If the rest of his wells produce about two inches each and the tank is down four inches, he concludes two of his wells are off.

Bad oil is a constant problem on a majority of leases. The pumper is the ground man to watch this. It is difficult to detect and is often missed until it shows up as settlings in lease tanks. Pounding of pumps on low fluid levels often cause cut oil. A pump that is in poor mechanical condition may result in cut oil. Water with the production may increase the formation of tank sludge by emulsions. This is particularlytrue in fields producing a low gravity crude, for such cuts are more difficult to break than those produced with lighter oils.

It is the practice of some firms to regularly take samples from individual wells, checking them for B.S. content. One firm operating a number of shallow pumpers in a low gravity area, regularly pull and recondition every well at the end of an established period, regardless of well action or condition of the crude as produced. Bad cups and seats and low fluid levels are the chief causes of bad production. Crude that is gas-cut can often be bettered by holding a slight backpressure against the tubing. Often too, if a well makes some bad oil after a working over it will purify itself if produced for a week.

There are two important reasons for holding bad oil to a minimum. The first of these is that bad oil from one well may reduce gravity of the entire lease production, placing the crude in a lower price bracket. The second reason is that of the production obtained, a variable proportion is sludge, detracting from net production.

In checking a well for pumping action, the time required for the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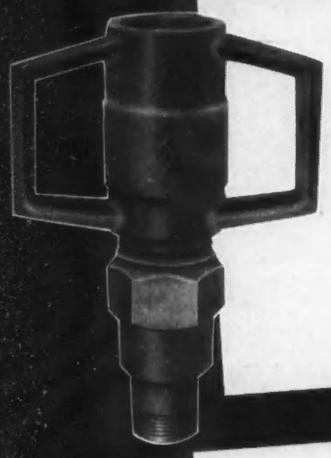


"ERIE" IMPROVED STUFFING BOX

Our Erie Improved Polished Rod Stuffing Box is constructed of heavy malleable iron, in only 4 parts. The two glands which constitute the wearing parts are easily replaced at low cost. Glands are 2½" long, offering large bearing area which increases life of both glands and rod and provides ample bearing area for loads imposed when rod is out of line. Glands are furnished of cast iron, solid babbitt, or babbitt-lined malleable iron.

6 standard ½" stuffing-box rubbers are used. As rubbers wear, head is screwed down until a thickness equal to only 2 rubbers remains.

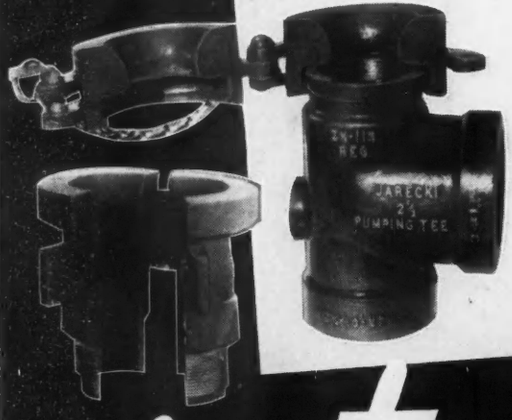
A large oil reservoir is provided at top, for lubricating rod when well pumps off. This box has ample strength to withstand the hardest service. Offered in 2", 2½" and 3" sizes.

JARECKI IMPROVED PUMPING TEE

The Jarecki Pumping Tee forms a connection between the tubing, flow or lead line, and stuffing box of a pumping well.

Because it is threaded to screw directly onto either regular or upset-thread tubing, this tee eliminates swaged nipples, sub-nipples and bushings. Flow or lead line screws directly into side of tee, and stuffing box or threaded bell nipple screws directly into top. Tee also has a band around top, for attaching hinged bell nipple of the threadless type, and 1" bleeder connection.

Tee is made of heavy malleable iron and has three times the weight and strength of the conventional tee. It has extra-long threads and is plainly marked as to thread size. It is offered in 2", 2½" and 3" sizes. Regular or Upset, x 2", 2½" or 3" Flow Line. Write for Bulletin No. 1.



JARECKI THREADLESS HINGED BELL NIPPLE

The Jarecki Threadless Hinged Bell Nipple is an improved sucker rod guide which protects the threads of the pumping tee when running or pulling rods, and provides a level seat for the elevators. It clamps around the band of any standard malleable tee of corresponding size.

The Nipple sets upon the flat end of the tee. Thus the weight of rods and shock of elevators striking Nipple, are carried by body of tee — not by its threads.

Constructed of malleable iron in 2", 2½" and 3" sizes.

THREADED BELL NIPPLE. For the operator who prefers the threaded type. Screws into top of pumping tee, protecting threads and providing a level seat for the elevators. Offered in 2", 2½" and 3" sizes. Write for Bulletin No. 3.

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OIL FIELD EQUIPMENT

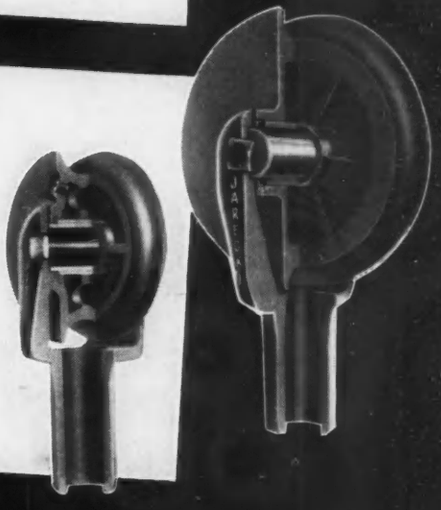
JARECKI IMPROVED BERRY CASING HEAD

Made of semi-steel, the Jarecki Improved Berry Casing Head is designed for high-pressure work, having a test pressure of 2,000 lbs.

This head offers a number of valuable features, including: (1) Full-length A. P. I. casing thread and full-length side-outlet threads. (2) Inclined set screws, arranged perpendicular to bevelled edge of top, thus eliminating bending or breaking of screws. (3) Circular interior, insuring smooth passage of tubing collars. (4) Circular exterior, permitting ready attachment of chain tongs. (5) Set screw flange provided with drain holes. (6) Neat appearance.

This Casing Head is ruggedly constructed throughout. It is offered in all standard casing sizes. Fully described in our Bulletin No. 4, available upon request.

"JARCO" ROLLER PULL ROD CARRIER

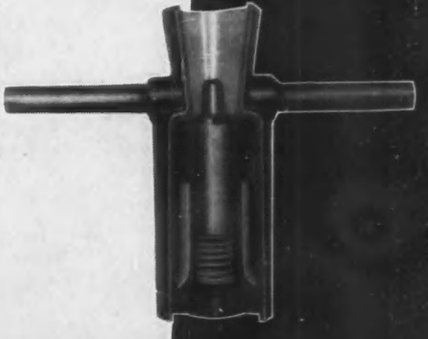


Our NEW, HEAVY DUTY 6" diameter size of this carrier is designed to be used at the "peaks" of catenary curves and as a hold-up.

Oil from the ½ pint reservoir in the wheel is metered slowly, through the porous iron-copper alloy bushing to the hardened, ground, and lapped pin. One filling of oil will last one year. Felt dust seals positively keep dust from reaching the bearing surface. Works perfectly for vertical loads up to 1000 pounds.

The REGULAR "JARCO" Roller Pull Rod Carrier, with 3¾" diameter wheel, is designed to be used on fairly level rod lines, usually on every third post, for vertical loads up to 300 lbs. Oil capacity within the wheel is sufficient to last 6 months. Completely described in Bulletin No. 5.

JARECKI-COLLINS SUCKER-ROD BOX CLEANER



The Jarecki-Collins Sucker-Rod Box Cleaner is used for removing dirt, sand and gritty material from sucker-rod boxes and couplings. This tool may also be used as a thread lubricator.

Before a rod is run into the well, its box or coupling is guided into the funnel of the Cleaner. The Cleaner is then raised and lowered three or four times under the box or coupling. This movement actuates a plunger within the Cleaner, causing it to jet the cleaning fluid against the threads and clean them thoroughly. A thin film of oil is left on the threads. Tight, properly made-up joints are insured.

The Jarecki-Collins Sucker-Rod Box Cleaner may be used on all sizes of sucker rods, is entirely self-contained, and is automatic in operation. Its use will reduce pin breaks. Write for Bulletin No. 2.

Jarecki

MANUFACTURING COMPANY

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fillup is a point to be watched. A 1600-foot well equipped with two-inch tubing, having pump working through a 16-inch stroke, requires about two hours for a fillup. Other depths in proportion to tubing size and length ot stroke. In pulling a well for a look at the pump it is well to watch the rod, checking it for height of oil in the hole as an indication of possible tubing leakage. If rod is dry to 1000 feet, then that is normal fluid height, a point of leakage, or the point to which the fluid column was allowed to recede through imperfect bottom-hole equipment.

It frequently is found that cut oil results from a pump in good condition when it operates against a light head. With a full tubing such wells make nothing but clean oil. In some instances it is difficult to get a new pump, or one just overhauled, started. One pumper has started a number by watering the tubing. In a particular case he could not get a new pump to take hold of the fluid. As a pond of water was nearby, slightly above the level of the well head, he filled the tubing with water by flowing it through a length of pipe. With this load on the pump, the well immediately began normal production. Crude in the lead line could have been used, but was of doubtful cleanliness and might have plugged the pump.

In wells greater in depth than those ordinarily pumped by rod line, jacks are customarily balanced with the fluid load. Because of this, it is far more difficult to detect pump operation by feel of the pull rod. The more accurately a well is balanced, the less ordinary vibration there is in the system. When a deep pumper has pumped off the well is out of balance and at this time rod line vibration may be interpreted, but not as accurately as in more shallow wells. As with shallow wells, experience is the best basis for analysis of actual pumping.

On wells pumped with individual power units, the polish rod tells the story to the pumper. By its feel, the operator checks pump operation, fluid level, sanding; in the same manner as the pumper on shallow leases checks his wells through the pull rod.

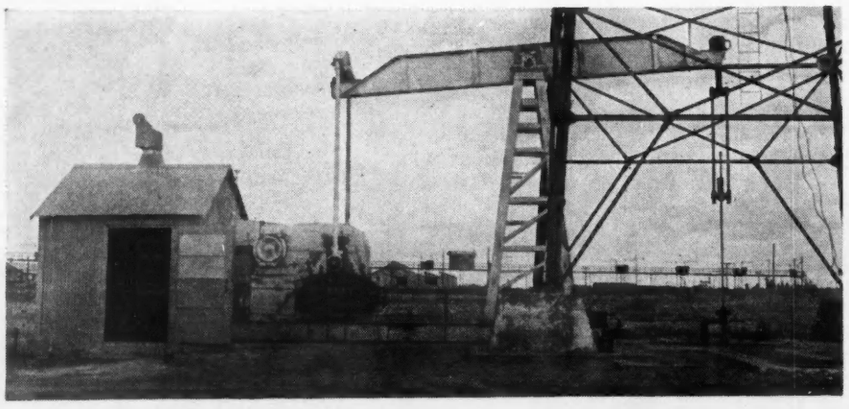
The motor on the individual unit tells far more of the story than does the engine on a central power. Actual balance of the well can be judged by listening to the power, and by watching the polish rod. When the regular speed of the power slacks off on the up stroke and speeds up on the down stroke, the beam needs more weight, and vice versa. Either condition is indicated only when the well is producing a normal fluid volume.

A properly balanced unit pumper operates smoothly. The more rod in the hole, the less vibration, this following not so much from rod weight as from dampening effect of the fluid column.

Bumping of a pump in a deep pumper can usually be detected. This may result from sand accumulation or may be due to empty tubing rather than to error in placement of pump. An empty tubing string is considerably shorter than a string weighted by a fluid column. Undue friction resulting from excessive paraffin, gum or bind places a definite drag on the engine. Another indication of drag, aside from the increase of the engine load, is reflected in the tubing which sometimes attempts to rise out of the well on the up stroke when there is excessive friction to rod travel. On rod breaks, although it is generally difficult to accurately judge the probable depth of the break, an engine on a heavy well may not pull the counterbalance over if the rods are broken near the top of the string. Vibration is high with a broken string, but is lessened with breaks nearing the bottom of the hole.

A relief valve and pressure gauge can be used to advantage in checking pumping well operation. The relief is placed directly in the lead line, shunted by a bypass, and set to kick off at about 125 pounds. With the well pumping and with the gauge between the relief and the well head, inability of the well to hold its pressure is a sign of tubing leak. Although the relief will kick off more or less intermittently even during normal operation, highly spasmodic production denotes pump trouble either in cups or because it does not fill properly. There is reason to suspect the standing valve or caving if back pressure swiftly drops when such a pumper is shut down.

Holding of back pressure as a means of checking pumping operations cannot be satisfactorily done on wells in which the tubing is open into the casing. Some operators, particularly in the Texas Panhandle, use the back pressure method to reduce pull jobs from paraffin. The well is allowed to surge itself clean by swift opening of the relief by-pass control and during normal operation it is found that paraffin deposits are reduced by the holding of pressure on the tubing. In weighing such an installation the increased pressure is not necessarily reflected in the polish rod load for with back pressure the friction of the fluid is usually decreased.



Both motor and polish rod tell the story of the pump on the heavy beam unit. With the backing of experience the pumper judges well condition, pump operation and fluid level.

WORLD DEVELOPMENT and TECHNOLOGY

Edited by
WM. V. GROSS, Associate Editor

Daniels reports settlement of expropriation "hopeful"

Prospects for settlement of the oil controversy with Mexico are "distinctly hopeful," President Roosevelt was told last week by Ambassador Josephus Daniels.

Other than to say that he had read in the papers about the activities in Europe of W. R. Davis, oil broker interested in disposition of oil secured by the Mexican government through the expropriation of American and English properties, however, President Roosevelt refused to comment on the situation when asked about it at a press conference.

Ambassador Daniels said he had no knowledge of reports that England was considering the reestablishment of diplomatic contacts with Mexico in order to secure some of the oil, but said Mexico is selling a little oil to a few of the South American countries as well as to Eastern States Refining Company, Houston, with which it has a contract.

The question of Mexican oil was before State Department officials throughout much of the week leading to suggestions that since Mexico is unable to move any great quantity of its oil into the European trade and is suffering from the European war, the Cardenas government may now be willing to consider a settlement of the problem on terms more to the liking of the companies whose properties were taken.

Petrolera Nacional gets 1300-gallon well in Cuba

Petrolera Nacional de Motembo, S.A., recently completed No. 10 in Motembo field of Cuba at 1156 feet for an initial production of 1300 gallons and announced intention of drilling Nos. 11 and 12 immediately.

On September 8 the company completed No. 9 at 1041 feet for an initial production at 2500 gallons.

Motembo production is practically straight gasoline.

Exploratory drilling in Uganda is encouraging

Exploratory drilling in the region of Lake Albert, Uganda, a section of Africa east of the Belgian Congo and west of Kenya, apparently will continue as African and European Investment Company continues to find favorable showings in the neighborhood about Kibiro, 10 miles south along the eastern lake shore from Butiaba.

A short history of the organization's prospecting for oil in the region may be extracted from the chairman's recent report as follows:

"Exploratory shallow-hole drilling was started in December, 1937, on Waki Hill near Butiaba with the object of selecting a site for the first deep test well. Deep drilling was commended in July, 1938, and the first well was completed in March at 4013 feet. At 4008 feet the bore passed through the sedimentary rocks into the basement complex consisting of igneous and highly metamorphosed rocks, and the well was accordingly abandoned.

"Formation tests proved the absence of oil in economic quantities in this well, but we found many traces of petroliferous matter, the most encouraging being an oil-impregnated sandstone from 3849-52 feet which gave 5.9 percent by weight of free oil. An interesting geological feature was the persistence of sedimentary beds to a vertcial depth of 4008 feet. We had not expected to encounter the sediments beyond 2000 or 2500 feet."

The next field selected was the Kibiro area, a vicinity of hot springs and salt deposits where geological conditions are somewhat different from those at Waki Hill. Exploratory shallow drilling was commenced in March to determine structural conditions. By the end of May, four shallow holes with an aggregate footage of 1675 feet had been drilled. The report continues:

"Results of the exploratory drilling in this area have been most encouraging. In No. 4 hole several beds of oil sand have been passed through from 90 to 452 feet."

[The report gives them an aggregate thickness of about 96 feet and lists among other favorable indications the presence of water under pressure and a good oil and gas showing at 450 feet.]

"Further exploratory drilling is now proceeding, and as soon as all the necessary geological data have been obtained the second deep test well will be started. Judging by the results of the exploratory drilling, we are optimistic for the success of this test."

MEXICO'S PROGRAM

Vicente Cortes Herrera, general manager of the producing branch of Petroleos Mexicanos, explained in Tampico recently the government's oil program as embracing the following immediate objectives:

1. Production will be increased from 145,000 barrels daily to 203,000 barrels to accommodate the increased capacity anticipated from planned refinery construction.

2. Refining capacity will be increased from 101,000 to 178,000 barrels daily, the 25,000-barrel discrepancy going to Houston.

3. Twenty new wells will be drilled in Poza Rica.

Austrian production three times as great as year ago

Production of mineral oil from wells which were originally drilled in Austria by American engineers continues to increase.

After the incorporation of Austria as the 'Ostmark" of Greater Germany, further wells have been bored beside the original American-bored wells.

In July, 1939, total production of these oil wells amounted to 12,961 metric tons. This is almost three times as much as the average monthly yield during 1938, which was 4700 metric tons. During 1939 production has been increased steadily, moving from 8106 in April to 9666 and 11,289 metric tons in May and June 1939.

William L. Smyser, assistant trade commissioner of United States in Berlin, is the source of the foregoing information.

Slight gain recorded for Netherlands Indies output

Central Bureau of Statistics, Batavia, Java, announces crude oil production in the Netherlands Indies increased slightly from 1,865,948 metric tons in the second quarter of 1938, and 1,914,583.2 metric tons in the first three months of 1939, to 2,017,746.9 metric tons in the second quarter of 1939. The increase was participated in by all oil fields in the Netherlands Indies except those in Java, which registered a decline from both of the comparative periods mentioned. Details of the above follow:

Netherlands Indian Crude Oil Production
(In Metric Tons)

Oil Field—	Second Quarter 1938	First Quarter 1939	Second Quarter 1939
Java and Madura	259,108	209,853	198,975
North Sumatra	227,367	233,118	251,212
Palembang	696,313	728,419	789,713
Djambi	242,188	291,538	303,605
East Borneo	245,144	242,086	247,455
Tarakan	175,749	188,551	193,118
Ceram	20,076	21,015	33,665
Total	1,865,948	1,914,583	2,017,746

Discrepancies in columnar totals are accounted for by the fact that fractional tons are omitted in giving each field's production.

MEN IN THE INDUSTRY'S NEWS

THREE ATLANTIC REFINING COMPANY SUBSIDIARIES ELECT NEW PRESIDENT; NEW DIRECTOR FOR PARENT FIRM

NEW DUTIES FOR ROBERT C. TUTTLE, E. J. HENRY AND PAUL SHUMAN.

ROBERT C. TUTTLE

SEVERAL promotions among the executive heads of The Atlantic Refining Company and its subsidiaries have been made. These included new presidents for The Keystone Pipe Line Company, The Buffalo Pipe Line Company and The Atlantic Pipe Line Company, all subsidiaries of The Atlantic Refining Company; and election of a new member to the Board of Directors of The Atlantic Refining Company.

Robert C. Tuttle, a vice president and director of The Atlantic Refining Company, was elected president of The Keystone Pipe Line Company and The Buffalo Pipe Line Company. Tuttle entered the employ of The Atlantic Refining Company at the age of 17 as a stenographer. He was elected a vice president of the company in 1931 after serving as assistant manager and manager of the marine department. He is a vice president and director of the Philadelphia Maritime Exchange, a director of the Port of Philadelphia Ocean Traffic Bureau, and a member of the executive committee of the American Steamship Owners' Association.

E. J. Henry, vice president and director of The Atlantic Refining Company, has been elected president of The Atlantic Pipe Line Company. Henry attended Girard College, Philadelphia, and joined The Atlantic Refining Company at the age of 17 as a junior stenographer. He was elected assistant secretary of the company in 1915; a director in 1923; and a vice president in 1931. He is a member of the Racquet Club, Philadelphia, and the Merion Cricket Club, Haverford, Pennsylvania.

E. J. HENRY

Paul Shuman, treasurer of The Atlantic Refining Company, has been elected to membership on the board. He became associated with the company in 1920 as an accountant in the controller's office. Shuman was elected assistant treasurer in 1929 and treasurer in 1937.

PAUL SHUMAN

HARRY A. WALLACE, JR., United Fuel Gas Company, Charleston, was re-elected president of the West Virginia Oil & Gas Association during the organization's recent annual meeting at Charleston. Wallace B. Gribble, Clarksburg, was named vice president to succeed W. R. Kerwood, Jr., St. Marys, and Edwin R. Robinson, Fairmont, was re-elected secretary-treasurer.

J. EDGAR PEW, vice president in charge of production for Sun Oil Company, Philadelphia, visited the company's Southwest division headquarters at Dallas the past week. The annual picnic of the Dallas office was deferred until his arrival, as he has made it a rule to participate in the outing, which he inaugurated some 20 years ago.

W. F. KNODE and family have moved to Calgary, Alberta, Canada, where he is in charge of the Canadian office of Parker, Foran, Knode & Boatright, consulting engineers.

R. W. HARRISON, formerly with Continental Oil Company, is now associated with Parker, Foran, Knode & Boatright, consulting engineers, and is located in the firm's Calgary, Alberta, Canada office.

ARCHIE BROWN, drilling superintendent for Caribbean Petroleum Company, Venezuela, C. A. (Cappy) Ricks of Venezuelan Oil Concessions, and A. F. Driskill, drilling superintendent for British Oil Development, Limited, Iraq, were guests of the Los Angeles chapter of the Nomads at a recent meeting.

DR. R. J. GONZALEZ of Humble Oil & Refining Company, addressed the Houston Geological Society October 12 on "Economic and Statistical Aspects of the Petroleum Industry."

BLAIR McCARTER, evaluation and salt dome specialist, has removed his offices from Lafayette, Louisiana, to 2522 Hazard Street, Houston.

DR. BYRON B. BOATRIGHT has returned to Houston from Calgary, Alberta, Canada, where he has been for the past six months. Boatright is a member of the firm of Parker, Foran, Knode & Boatright, consulting petroleum and natural gas engineers.

HERBERT GREENFIELD, Calgary, vice president and managing director of Calmont Oils, Ltd., Alberta operating company, heads directors of the company who were re-elected last week. Also named were Sir William Cope, Bart, K. C., London; Sir Francis Price, London; Col. A. W. Pryce-Jones, London; Dr. L. A. Maxwell, Calgary; Reginald G. Smith, Calgary; G. W. Dover, Calgary, and J. Coxon, Calgary. The resignation of Lord Askwith, London, because of ill

health, was announced. Directors of the firm in England will be consulted with respect to a nominee to fill the vacancy.

H. K. REED, Calgary, last week was appointed president and chairman of the board of York Oils, Ltd., Alberta producing company. Other officers named are: G. R. H. Anderson, managing director; R. M. Spence, vice president, and D. K. Yorath, secretary, all of Calgary.

DR. G. S. HUME, head of the Canadian geological survey, Ottawa, is currently surveying the Wainwright structure of Alberta, having completed work in the Jumping Pound and Pekisko areas of that western province.

J. W. GILLILAND, T. F. Morrow and A. H. Meadows last week organized the Illinois General American Oil Company as an Illinois corporation. Headquarters have been established at 208 S. LaSalle Street, Chicago.

F. R. WEBASTER was re-elected president of Highwood-Sarcee Oils, Ltd., Alberta operating company, when directors held their annual meeting in Calgary last week. Other officers named are R. G. Straker, managing director; and P. J. Tims, William A. Ackland and H. H. Bradburn, directors.

HAROLD O. SMEDLEY has been named district geologist in Kansas for Skelly Oil Company. Assistant Kansas district geologist for several years, Smedley succeeds Howard S. Bryant, recently appointed division geologist for Kansas, Illinois, Indiana and Kentucky.

E. FLOYD MILLER, of Oliphant Oil Company, was elected president of the Shreveport Geological Society October 5. He succeeds Chester C. Clark of Union Producing Company. J. D. Aimer, of Arkansas Fuel Oil Company, was named vice president; Weldon Cartright of Tide Water Associated Oil Company, secretary-treasurer; and Miss Anna Minkofsky, of Shell Oil Company, historian. The latter is a newly created post.

WILLIAM H. LOCKE, Oil City, has been elected president of the Pennsylvania Gas Company and of the Pennsylvania Oil Company. He succeeds the late B. H. McLachlan, who was fatally injured when struck by an auto in Buffalo, New York, last month. Locke resigned as vice president and director of United Natural Gas Company and affiliated companies to assume his new duties.

F. P. BYRNE, Calgary, last week resigned as managing director of Anglo-Canadian Oil Company, engaged in Alberta oil development. He will continue as vice president and a director of the company, and his duties as managing director are being taken over by J. Grant Spratt, formerly resident district engineer of the petroleum and natural gas division of the Alberta department of lands and mines.

LES CLARK, Shell district geologist at Wichita, has been transferred to the Illinois basin and will be replaced at Wichita by John Galle.

EMRY STUEDLE and Ray U. McKinney, formerly with Seismograph Service, have joined with C. M. Peterson, formerly of Oklahoma Natural Gas Company, in the formation of Seismic Developments, Incorporated.

AL J. BRODERICK, West Texas oil producer, left Fort Worth by plane October 10 for New York to attend the funeral of his brother, Edward J. Broderick, who died of a heart attack at his New York residence.

R. A. PEEK has been made manager of the newly created Southern division of Barnsdall Refining Corporation. Headquarters for the division, which resulted from merger of the southwestern and central divisions, will be at Tulsa.

HOWARD S. BRYANT, geologist at Wichita, Kansas, for Skelly Oil Company, has been transferred to Tulsa, Oklahoma, and will have charge of work in Kansas, Missouri, Colorado, and northern Kentucky.

JOSEPH E. MORERO has been made chief geologist for Skelly Oil Company at Tulsa, Oklahoma, in a reorganization of that department.

R. B. RUTLEDGE, geologist for Skelly Oil Company, will retain his headquarters at Tulsa, Oklahoma, in the current reorganization of the geological department, and will supervise Oklahoma, east and coastal Texas, and Louisiana.

ROBERT CASSINGHAM, Amerada Petroleum Corporation district geologist in Kansas, has been transferred to Seminole, Oklahoma. Jack Capass will replace him at Wichita.

HARRY COOPER, geologist and scout for I.T.I.O. Company at Wichita, Kansas, will remain there despite the closing of the company offices.

JOE M. WILLIAMS, chief engineer and in charge of the map department of the Magnolia Petroleum Company, Dallas, has recovered sufficiently from a long illness to visit his office.

CHARLES ROOP, former district geologist for I.T.I.O. Company in Kansas, has resigned to develop a consulting practice.

WILLIAM M. SPICE, San Antonio operator and geologist, has just returned from a trip to New York.

A. F. HOLLIDAY, president of Hiawatha Oil & Gas Company, Pittsburgh, visited South Texas last week inspecting properties in Sinton and Corpus Christi areas. His company is commencing a 10,000-foot test in Saxet field.

NATE ISENBERGER, geologist with Phillips Petroleum Company, Corpus Christi, is back on the job after a serious illness.

F. H. McQUIZZAN, Lion Oil & Refining Company, El Dorado, Arkansas, visited South Texas fields last week.

FREDERICK W. NUTE, San Antonio independent, is in Kentucky looking over recently acquired properties.

MAJOR BURDETTE GRAHAM of Oklahoma City is visiting his brother, Tom Graham, Corpus Christi oil man.

DIED:

WILLIAM W. KANEY, 72, pioneer Pennsylvania and Kansas oil man, died October 8 at his home in Chanute, Kansas. Kaney, who started in the oil business at the age of 12 in his home town, Titusville, Pennsylvania, moved to Kansas in 1895 with National Oil Company and acquired land that later became part of the Chanute field.

S. T. STERRITT, 52, West Texas-New Mexico district production superintendent for Atlantic Refining Company, died of a heart attack, October 5 at his Wink, Texas, residence. He entered the production department of the company at Corsicana in 1924, and had been head of the Wink district since 1932. Survivors include his wife, a son and his mother, who lives in Parkersburg, W. Va. The body was forwarded to the latter city for burial.

THEODORE C. KINGSLEY, 63, widely known Pennsylvania oil operator, died October 5 at his home at Pleasantville after an illness of eight weeks. As a driller, he assisted in putting down the first deep wells on the coast of Peru for London Pacific Petroleum Company. He later was associated with Billy Vandervert in what was then the new Illinois oil fields, and the two were successful in opening a new pool there.

ARCHIBALD JOHN SCOTT, 51, organizer and managing director of Anaconda Oil Company, Ltd., Alberta operating company, and one of the first Canadian operators to become interested in the Steveville field northeast of Brooks, Alberta, died at his home in Calgary October 1 after a brief illness. He came to Alberta from London in 1904.

IRA RINEHART, 41, president, Rinehart Oil News Company, died Friday, October 6, at a Tulsa hospital after an extended illness. Rinehart had been a resident of Tulsa since 1911. His company published "Ira Rinehart's Oil Reports." Previous to publishing this report he wrote oil news for the Daily Oklahoman. At the time of his death, he published reports in Tulsa, Houston, Fort Worth, Wichita Falls and Wichita, Kansas.

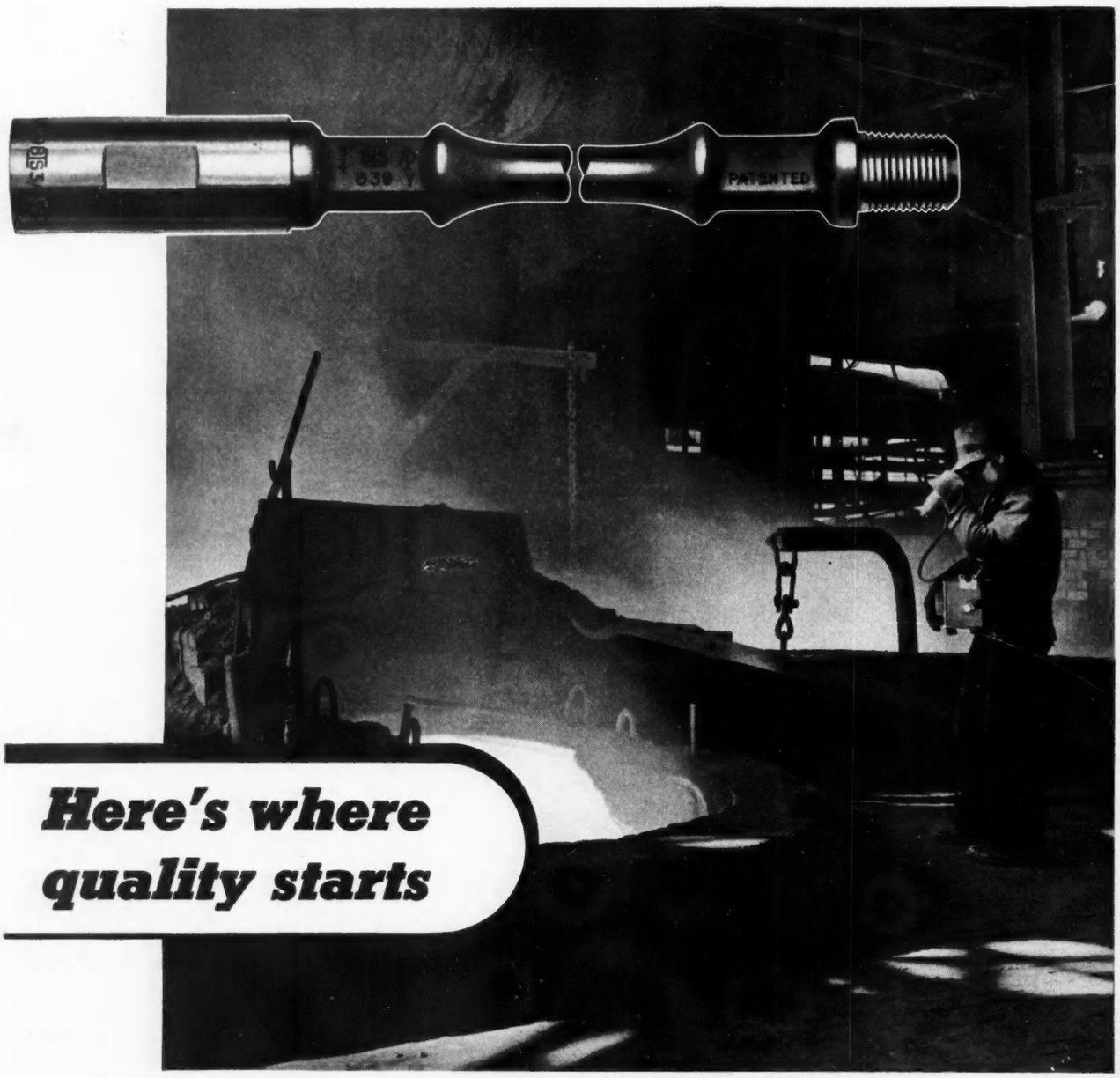
E. M. ELLIS, 24, of Cleveland, Oklahoma, and Chester F. Roberts, 30, of Okmulgee, Oklahoma, were fatally burned October 7 in an explosion and fire at an oil well in the Lake Centralia-Salem pool of Marion County, Illinois. The bodies of both men were taken to their Oklahoma homes for burial.

LEONARD J. TRUITT, 35, oil well driller of Keensburg, Illinois, was killed and his wife severely injured October 4 when the car Truitt was driving struck a truck two miles north of Grayville, Illinois.

J. W. DAVIS, 42, president of Davis Gas Corporation, Paola, Kansas, died Friday night, October 6 in a Kansas City hospital after being ill only three days.

WALTER E. COOKE, 64, Paterson, New Jersey, contractor and philanthropist, who was associated with R. L. Gay in drilling the discovery wells in the Blue Lake and Zwolle oil fields in Sabine Parish, Louisiana, died suddenly at his home October 9. Cooke owned large oil interests in Sabine Parish.

WILLIAM A. POWERS, 58, oil operator, died in a Houston hospital October 4.



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BETHLEHEM STEEL

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THE WEEK'S NEWS SUMMARIZED

Investigation

Already a week behind schedule as it listened for the third week to expressions of the oil industry's conditions and needs, the Temporary National Economic Committee sought frantically to bring these hearings to a close. The committee, consequently, was forced to abandon its original planning of hearing everyone who wanted to appear.

The past week, the committee heard marketing conditions of the industry aired, with most of the witnesses, who were independents, charging monopoly and unfair competition from major companies and asking for divorcement of this branch of the business.

Allowables

Granting of higher allowables in several Texas fields, filing of a new suit attacking the East Texas proration method and hearing of evidence in another East Texas proration case were outstanding allowable developments of the week.

Higher allowables granted by the Texas Railroad Commission totaled 48,517 barrels a day on a seven-day basis, which means they will average about 35,000 barrels daily because of Saturday and Sunday shutdowns. This still leaves the state approximately 49,000 barrels under the Bureau of Mines estimate of consumer demand in the state. It is anticipated that a portion of the latter quantity will be given to applications for increases that have not been acted upon.

Meanwhile, the East Texas proration problem became more muddled as a new suit attacking the latest method applied there was filed. This suit, by an independent producer, declares the order unfair because it gives more oil to wells of the same or lower potentials on adjacent tracts than is given to his wells. He declared too much weight was placed on acreage in figuring well allocations, and that potential was the only fair basis.

This is exactly counterwise to Humble Oil & Refining Company's contentions. Last week before a three-judge federal court in Houston, Humble alleged it was being penalized because insufficient weight was placed on acreage and oil in place. The company contended while it owned 14 percent of all the oil in place in the field it was allowed to produce but 11 percent, and asked that it be given 21,740 barrels more in daily allowable.

Expressions for an oil conservation law for Illinois came from two of the state's major producers last week, while the Illinois Oil Producers Equity Association revised its former stand and announced its opposition to a control law. The Texas Company and The Pure Oil Company were the two major producing firms that expressed their desire for proration, one through its company publication and the other through its president.

Markets

Advancements in crude oil prices in several districts were the outstanding notes of the industry's markets during the past week. Increases of 4½ to 8 cents per barrel were posted for 95 percent of Michigan's production, and gave the state its first "dollar oil" in a year. The largest single increase in Pennsylvania Grade crude in nine years occurred when postings were advanced 25 cents on October 6. This was the fourth advance this year, and lifted prices in various districts from 56 to 62 cents a barrel. Bradford and Allegany district crude is now drawing $2.25 per barrel. Sohio Corporation advanced its price for crude in the Griffin field, in Illinois and Indiana, five cents a barrel to 95 cents for sand production and 85 cents for McClosky lime oil.

Federal Control

A Mid-Continent producer for the past 22 years last week addressed a letter to Secretary of the Interior Harold L. Ickes charging the industry with wasteful producing methods, and asking that the Department of Interior use its power to stop such waste. He declared that gasoline would be selling at $1 per gallon in 20 years, unless this was done, and that otherwise the United States oil reserves would be exhausted much sooner than anticipated.

Economic Study

The industry's economic and political situations and aspects will get a thorough going over during the coming week, as the Independent Petroleum Association of America convenes for its annual meeting in Fort Worth. Besides a number of prominent speakers, important subcommittees of the association are scheduled to make their reports after exhaustive studies of conditions and needs.

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Oil at the Capitols

Temporary National Economic Committee hears independent marketers charge unfair competition from majors and ask for divorce of this branch

Marketing conditions aired in TNEC monopoly hearing

Conditions in the marketing branches of the oil industry occupied the National Temporary Economic Committee, in Washington, D. C., through most of its third week of investigation into monopoly in the industry, as the O'Mahoney group, already more than a week behind schedule, sought frantically to bring its hearings on oil to an end so as not to delay its study of steel, the next subject slated for survey.

Some Not Heard

Faced with scores of requests to be heard, the committee was forced to abandon its original plan of hearing all who applied and permit testimony only from those whom the Department of Justice staff felt could contribute something to the study.

Attaches of the committee said that so many persons in the industry had requested time that to hear them all would keep the hearings running for many weeks and would prevent achievement of the program which calls for a winding up of the industry investigations in December. The great majority of applications, it was said, had come in from marketers.

Wants Marketing Divorced

Divorce of marketing from other branches of the oil industry was urged upon the committee October 9 by Paul E. Hadlick, counsel for the National Oil Marketers Association.

Charging that the "present unfair competition of the major companies in subsidizing their marketing losses from other branches of the industry" is tending to squeeze the independent jobber out of business, Hadlick declared in a brief filed with the committee that there is ample precedent for divorce legislation, which he suggested might be extended also to pipe lines.

"Over 30 years ago Congress divorced the railroads from their operation of coal mines, timber lands and so forth," he argued. "The abuses existing in oil marketing through the subsidized competition of the major oil companies is far worse than that which prompted Congress to adopt the Hepburn Act.

Recent Divorcements

"Under the anti-trust laws as they stand the meat packers have been divorced from operating retail stores and the Department of Justice now has pending an equity suit to divorce the motion picture producers from operating theatres.

"More recent legislation by Congress along this line includes such legislation as divorcement of banking and investment and the disintegration of the public utility holding company systems.

"State divorcement legislation has been upheld in the courts," the committee was told, "including the Mississippi statute preventing corporations manufacturing cottonseed oil and meal from operating gins, the North Dakota statute prohibiting the operation or control of theatres by motion picture producers, the Illinois statute forbidding grain warehousemen from engaging in grain trading and numerous other state laws divorcing banking from investment and prohibiting manufacturers of alcoholic beverages from engaging in or having any interest in retail liquor stores.

Scores Subsidies

"We do not fear the competition of the major oil companies in marketing if such marketing was not subsidized from profits from other branches of the industry," Hadlick asserted. "Because of the consistent policy over these many years in operating their marketing departments at a loss, the only way we can see out of our difficulty, and the only way to prevent complete monopoly in the oil industry, is the prompt passage of divorcement legislation.

"At least divorcement of marketing and pipe lines from the other branches of the industry would cut two of the avenues of oil monopoly. It would place all the marketing branch on the same footing competitively and make them all compete both in purchasing their refined supplies and in selling same to the dealers and consumers. If control over oil is to be broken the breaking must start some place. The hardiness of the oil octopus is not to be hindered by a few anti-trust suits. I am convinced that the plea of nolo contendere accepted by the government in the second Madison oil case, involving the conspiracy to fix jobber margins (the real problem of which the jobber complained) has not solved the jobber problem. Something more is needed."

In his direct testimony, under questioning by Chairman O'Mahoney, Hadlick disclosed that his association has 250 members out of a total of 8000 independent oil jobbers, the first time the membership of the group has been revealed.

The witness showed the committee a chart of the profits of the major companies, explaining that production and pipe line departments produced, on the whole, more than twice the total profits of the companies, while the losses in refining and marketing cut the profits in half.

Quotes SEC Statements

He also quoted from registration statements filed with the Securities and Exchange Commission by integrated companies to show that the companies themselves admitted that marketing operations were money losers.

"Your position is that the integrated companies make such money on production and transportation that they can afford to conduct marketing at a loss," the chairman inquired.

"I wish this committee, before it completes its investigation, would find the true picture as between refining and marketing," the witness replied, adding that the independent jobber can distribute about 20 per cent cheaper than the major companies.

"You feel that if the jobber were not pressed as you apparently believe he has been pressed by major companies marketing at a loss, he would still be able to market at a profit without impairing the position of the consumer?" Senator O'Mahoney asked.

"That is right," Hadlick said.

The chairman pointed out that the witness' testimony indicated that the majors are competing so strongly among themselves that they are losing money and asked if he thought they conducted this phase of the business in an uneconomic way, receiving an affirmative answer.

Questions by Representative Sumners went into the possibility of requiring integrated companies to keep separate books for each branch of the business they engaged in, while Clarence Avildson, Department of Commerce member, suggested that if the major companies turned all marketing over to independents they might, in course of time, find themselves at the mercy of that group.

Effect on Rates

It was pointed out by Congressman Sumners that other witnesses had held that if the companies were not permitted to build pipe lines new fields would not have been so quickly developed, but the witness held that there were other and adequate means of transportation available to producers in new fields and asserted that "anyone" would be able to raise money to build a pipe line if the companies were out of the picture.

Under questioning by Avildson, the witness expressed doubt that pipe line rates would ever be reduced by the Interstate Commerce Commission in view of the opposition of the railroads, adding that "railroad rates have been dictated by the major oil companies from time immemorial."

Asked by Representative Sumners whether divorce of pipe lines would have any effect on rates, Hadlick admitted that it might not, but held it would mean that pipe line profits would no longer be siphoned back to the major companies.

"What you say, when summed up amounts to this: that the integrated company tends to drive the small independent company out of business," Chairman O'Mahoney commented.

"That is right," the witness responded.

"And that the problem before the country is to determine whether or not it is in the public interest to maintain the independent non-integrated operator or to permit the integrated operation to grow even greater than it has grown?"

"I think that is your problem."

Would Not Eliminate Major

"Of course," the chairman pursued, "the contention is always made on behalf of the integrated company that they operate more efficiently and that they give the public a better service. Is it your conclusion, from your experience, that the integrated company should be eliminated?"

"I would not eliminate its function in marketing," Hadlick explained. "Let the integrated company supply that function. But I think an integrated company should be broken up so that it specializes either in manufacturing, distribution, transportation or production."

"Where do you draw the line between

the permissible degree of integration and a non-permissible degree?" the senator asked. "Would a refiner be permitted to own production?"

"I would have no objection to his owning production," the witness said, "because that is not affecting my kind of people." Hadlick explained also that divorce of pipe lines is of secondary importance to his organization. "Divorce of marketing would serve our purpose and it makes no difference to us whether we get divorce of transportation or not," he said.

Asserting that the independent jobber buys on a "protected" market, the witness testified that the Connally Act, the Interstate Oil Compact and the Bureau of Mines forecasts "fortify" the major companies in their control of the situation because "the proration of oil by the various states has placed a peg in the price for crude oil."

Suggest Repeal Connally Act

Asked by Representative Williams what is the effect of all the states not having proration laws, he said "that is the one thing that has saved the independent jobber from going out of business."

"I think the Connally Act should be repealed," he added, explaining, however, that he was in favor of conservation if confined to "a prevention of physical waste in conformity with engineering principles."

Referring to methods pursued by major companies in securing accounts, Hadlick cited the loan of equipment, painting of stations and similar concessions, leading to a query by Avildson as to whether such methods did not violate the Robinson-Patman anti-price discrimination act. The witness explained, however, that the act did not apply to such concessions given subsidiary companies or agents.

Asked by the Department of Commerce member of the committee whether he had applied to federal agencies enforcing various fair trade laws for protection, the witness indicated that only one or two appeals had been made, leading to comment by Avildson that apparently the jobbers were asking the committee to do something about unfair competitive practices instead of going to the properly constituted agencies.

Independent distributors October 10 told the committee of major company practices which they contended restricted the flow of independent brands of oil and greases, Irving B. Culver, sales manager of National Oil & Supply Company, Newark, New Jersey, listing among the restrictions credit signs and courtesy card privileges, lease and agency agreements, installation of equipment, repaint and repaving.

Loses Accounts to Majors

Culver, in his formal statement, told the committee that in 1938 his company lost 172 accounts to 13 major companies, asserting that the method frequently pursued in securing accounts is to offer a dealer credit on condition that he discontinues the selling of Quaker State products, distributed by the witness' company.

Gradually, the witness said, the major company tightens its control over the dealer until he becomes a lessee, and by increasing operating expenses limit his earning power to approximately $22 a week. Under this arrangement, he related, the major companies enjoy freedom from state compensation insurance, social security and other taxes and liabilities.

In many instances, the committee was informed, if a dealer wishes to continue to sell Quaker State products in the face of major company opposition, he must "bootleg" them, taking down all advertising signs and keeping his stock hidden.

A long list of specific cases in which major oil companies had forced or attempted to force dealers to discontinue the handling of independent oils was laid before the committee by Arnold W. Craft of the Craft Oil Company, Avoca, Pennsylvania.

"It would appear that the gas price wars have been very effective in practically driving many independents into accepting almost any proposition, irrespective of how drastic it is, that the major companies have to offer," he said.

There is no open market for independent products, he stated, pointing out that in his own town of Avoca, 5000 population, there are 11 gas stations, all 100 percent controlled.

The objective of the integrated companies, he charged, is to destroy independent competition.

Scott Testifies

Only 13 percent of the total retail outlets in the District of Columbia are truly independent and free from any sort of major company control, it was asserted by L. S. Scott of Loughborough Oil Company, Washington.

While only 79 of the 619 outlets operating in December, 1938, were strictly independent, Scott said, only one major company operates more than two stations directly and one other operates through a subsidiary.

However, he added, three major companies sold approximately 55 percent of all the gasoline sold in the District of Columbia in 1938, and five companies accounted for approximately 70 percent.

"Without a sufficient number of independent retail outlets available and without responsible independent wholesale marketers, the independent refiner of gasoline, and particularly motor oil and motor lubricants, has no incentive to create public acceptance of a quality product or brand," he declared in laying his case before the committee.

"If the major oil companies are permitted to continue controlling the retail and wholesale marketing, they will also control the quality of the product that the consumer will be permitted to buy.

"It is strikingly evident to everyone who has been in the petroleum industry for any length of time that the major oil companies have for all practical purposes actual control of the market. The anti-trust and other laws are being circumvented in devious ways of which the Department of Justice and the Federal Trade Commission are well aware."

So long as the integrated companies are permitted to control marketing, Scott asserted, they will also control production, refining and transportation.

"If these same major oil companies can take a profit on the handling of petroleum from the time it comes out of the ground until it reaches the consumer, they can well afford to spend almost any amount of money to control the retail and wholesale markets," he contended. "This situation is gradually but surely forcing the independent retailer and wholesaler out of the picture."

Recommends Segregation

Segregation of the various branches of the industry and adoption of Federal licenses as contemplated in the O'Mahoney bill was recommended as a possible alternative to divorce of marketing by Henry A. Crouthamel, executive secretary of the Maryland Association of Petroleum Retailers, Baltimore.

Crouthamal reviewed conditions in Baltimore, explaining that more than 90 percent of the Maryland dealers recently asked their suppliers to use the Maryland Fair Trade Act, which allows the manufacturer of a trade-marked article to establish a minimum retail price, but were refused on the ground that the act could not be used because it did not specifically define a gasoline pump as a container bearing a trade mark.

The witness complained that the major companies in the Baltimore area were reluctant to give dealers a four-cent margin on gasoline, claiming that two or three cents was adequate, and cited figures showing that operation of a modern service station costs 3¾ to 4¼ cents per gallon, not including credit losses or taxes of any nature. On the other hand, he said, major companies had admitted that their cost of selling at retail was seven cents per gallon to nearly ten cents per gallon.

Equipment dealers consider the supply of lubrication and other equipment to service station operators by major companies is on a basis constituting unfair competition, it was disclosed by B. W. Rouark, general manager of Motor and Equipment Wholesalers Association, Chicago.

Tying-in and restrictive agreements tend to retard the free flow of goods, Rouark charged in his formal statement, and "with major oil companies controlling and dominating preferred locations throughout the country, such restrictive agreements tend to centralize distribution and further, in view of the high degree of centralization in the petroleum industry, result in a trend toward monopoly."

In many cases, it was alleged, the the companies furnish station operators with equipment at prices equal to or even below the cost of such equipment to automotive wholesalers and at less, rather than more, than the cost to the companies.

"Apparently oil companies follow the practice of using profits in their refining, production, pipe line and other operations to enter into competition with others in the sale of equipment in such a way that those others not having access to profits on other operations are unable to meet," he said.

Charges "Commercial Bribery"

"Instances proving the existence of the practices stated can be cited. We believe such practices to constitute commercial bribery. If present laws do not prohibit such practices, we believe that laws adequately prohibiting them should be enacted."

Rouark admitted that his group has not made a sufficiently detailed study

to be able to make recommendations as to laws desired for assuring a free and open market, but suggested that if there is competition between the major interests they constitute what might be termed a "multiple" or "class" monopoly which closes the market to distributors outside its own group, and suggested that the anti-trust laws be amended in such a way to prevent such monopoly.

"Possibly, national legislation prohibiting sales below cost, as definitely defined, or legislation making the practices set forth commercial bribery, or divorcement legislation, would be some of the proper means of prohibiting these practices in an effective way," he stated.

Claims Monopoly in Ohio

Charging the existence of an oil monopoly in Ohio, G. B. Ingram, president of the New Deal Oil Company, Canton, laid before the committee numerous documents, among them several which he said substantiate allegations that the major companies work together in setting prices.

Ingram submitted price bulletins supplied him by the Pennzoil Oil Company, whose products he distributes, purporting to show that marketers of gasoline in Ohio are notified at least a day ahead of time that their prices will change at the same time Standard Oil changes price.

The witness charged that a "black list" of price-cutting dealers has been published in his state, and that at least one dealer's association confers with major oil companies in regard to price conditions.

"It is my belief that the exhibits that I offer you will prove my contention that monopoly does exist in the petroleum industry in the state of Ohio," he stated.

Workers in the production, transportation and refining branches of the industry today earn, on the average, about 60 percent more than they did in 1914, hours worked per week average about 43 percent less and hourly wage rates have increased about 180 percent, the committee was told by H. H. Anderson, vice president of Shell Oil Company, St. Louis, in presenting data on the labor situation in the industry for the American Petroleum Institute.

Industry Creates Jobs

"As a creator of jobs," Anderson asserted, "the petroleum industry has been a great contributor to the economic strength of America. * * * The petroleum industry and the automobile industry together make possible the direct or indirect employment of over 6,000,000 American workers and the support of about one-seventh of our population."

Not only has the industry been a leader in the raising of wages and shortening of the working week, he testified, but it has been one of the foremost in adopting supplementary benefits for workers, years ago introducing vacations with pay, non-contributory old age pensions, insurance and thrift and stock-purchase plans.

At the close of last May, he showed, the 18 larger companies had in force a total of $82,387,500 of group life insurance on which they were paying the full premiums, and another $266,485,500 on which they contributed part of the premium, while employees also had $275,348,000 on which the workers paid the premium.

Average earnings in the oil industry are well above those for industry in general, Anderson declared, an A.P.I. survey in May, 1938, indicating an average annual earning of $2485 for office and supervisory workers, $1884 for production workers, $1866 for pipe line employees, $1845 in the refining branch, $2047 in wholesale marketing and $1385 at service stations.

Cites Higher Earnings

Even more conclusive of oil-industry leadership, he asserted, are the figures gathered by the National Resources Committee on 39,485,300 individual and family incomes, including 240,527 oil industry employees. This study, he said, showed that only 8.23 percent of the petroleum employees earned less than $1250 per year, whereas 59.63 percent of the national total received less than that amount; 54.71 percent of the oil workers received from $1250 to $2000 compared with only 22.63 percent of the national total, and 28.36 percent received from $2000 to $3000 compared with only 11.24 percent nationally.

That the figures are not "loaded" by "top" salaries, he contended, is shown by the fact that the salaried group, which contains all persons earning up to $12,000 per year, averaged only $2485 whereas the wage earners averaged $1870, or about $156 per month.

In addition to high wages and reasonable working weeks, the industry is marked by regularity and continuity of employment, the witness testified, pointing out that a survey of 245,900 employees showed that 80,000 had been with their companies for 10 years or longer and 5000 showed more than 25 years of service.

The trend of employment, one of the major subjects of consideration by the TNEC in its investigation of various industries, is difficult to determine in the oil industry, Anderson said, because of the existence of factors peculiar to the industry which make it difficult to secure comparisons with the normally used employment indices.

Production Employment

"Production employment has not followed activity indexes for several reasons," he explained in a review of the situation. "Exploration probably uses more employees, despite the scientific progress made through introduction and application of the torsion balance, the seismograph, the aerial camera, micro-paleontology, soil and gas analysis, and electrical conductivity. However, improved technique in methods of drilling and the application of advanced engineering practices to production operations have increased operating efficiencies and reduced relative employment.

"The changes in drilling equipment from steam to Diesel or Diesel-electric rigs and the introduction of portable drilling outfits, drilling barges in the swamps, automatic weight control on the drill stem, mud control, as well as a decrease in the size of holes drilled with consequent reductions in yardage of material to be removed and the number of strings of pipe to be cemented, etc., have reduced rig-building and drilling labor. On the other hand, wells are being drilled deeper and deeper; a 10,000-foot hole is no longer a novelty. The percentage of 'dry holes' in exploration drilling has decreased, and the proportion of oil recovered has increased.

"Proration has reduced the number and urgency of well-pulling jobs to such an extent that service companies have sprung into existence and are today contracting some of this type of work."

Pipe Line Employment Steady

Pipe line employment has remained fairly constant, a slight reduction over the past 10 years being attributed entirely to a reduction in the volume of new pipe line construction, he said. Refining employment apparently has declined when compared with the increase in crude oil runs to stills as a result of technological improvements in plant design and the adoption of automatic controls to secure better uniformity of product.

Anderson's analysis showed a definite trend toward the increased use of contractors, motivated by several reasons, such as the promotion of stability of employment among construction and maintenance workers and local labor conditions. The relative amount of contract work in the drilling field is estimated to have increased between 25 and 30 percent from 1929 to 1938.

The efforts of the oil companies to deal fairly with their employees have borne fruit in the harmony which exists in labor relations in the industry, he testified.

"The industry's wage scales have been usually the highest for like jobs in the areas, and its many supplementary benefits have been outstandingly favorable," he said. "In addition, the enunciation and application of general employment policies have usually been fair and equitable. The result has been reflected in the low 'quit' rate evident in the Bureau of Labor Statistics' figures on labor turnover, and the relative feeedom of the industry from strikes."

A 5-day strike in St. Louis service stations in 1933 was the first of any consequence in the industry for 13 years, he told the committee, and recent government statistics on strikes show that for 1933-37, inclusive, there were, annually, only 0.057 strikes per 1000 employees, with but 1.9 percent striking and less than 0.6 man-days per employee lost.

"This is outstanding when compared with corresponding figures for any one of several comparable industries," he commented. "While definite data are not at hand, it may be said conclusively that the strikes in other branches of the industry have been even less in frequency and consequence than those in refining; in fact, there have been practically none except a few scattered ones in marketing."

Wages Declared Low

Challenging contentions of major company witnesses that filling-station operators received high hourly wages, A. W. Hewett, president, and L. A.

Hartley, secretary, of the Petroleum Retailers' Association, Kansas City, Missouri, told the committee of lessees in that territory working 370 hours a month for a profit that figures out at 14 cents an hour.

Although Hartley contended that such wages were "average" throughout a large part of the territory from Kansas City east, he admitted under questioning by committee members that the situation in his area was due to cutting of prices and overbuilding of stations.

Contrasting the position of his group in the hearings with that of the major companies and the independent jobbers, Hartley testified he had been informed that the major companies figure their expense in connection with the compilation of material and the attendance of witnesses at $500,000 and said that Paul E. Hadlick of the Independent Oil Marketers' Association figured the cost to the independent distributors at $5000.

Hewett told the committee that the major company representatives are continually after service station operators to be "competitive" and meet the price cuts of other stations, and that the majors recommend that gasoline be carried as a "loss leader" and that dealers make their profit from other services.

Asked by Chairman O'Mahoney as to whether the price of gasoline was fair to the consumer, Hartley declared it was too high but contended that "the place to get a reduction in the gasoline price is not from the margin of the retailer but from the tank wagon price."

The association executives laid before the committee data in support of their contention that although the cost of filling station operation in the Kansas City area requires a margin of not less than 4½ cents, many stations are operating on a 2½-cent margin and some on as low as ½ cent.

"Through leases of their filling stations," it was charged, "these major oil companies have evaded responsibilities for social security tax payments and avoided responsibilities of the Wagner, Robinson-Patman and Sherman acts. They have also avoided chain-store taxes where these are assessed. These major oil companies have shifted the burdens of taxes and station costs to these lessees and then proceeded to hammer down the operator's income and the wages of his employees in order to destroy independent competition."

Because a fair-practice code designed to fix retail prices would ultimately increase costs to the consumer, the two witnesses said, the association favors a congressional investigation of the income and costs of oil company operation "with a view to setting a reasonable return on investment."

To give immediate relief to the operators, they recommended that the government protect lessees by forcing the major oil companies to assume the responsibilities of "bona fide employers" by the issuance by the Internal Revenue Bureau of regulations that where an oil company interfered with station management it would be considered an employer and subjected to social security taxes.

"Many recommendations are being made to relieve conditions confronting various elements within the petroleum industry," it was pointed out. "Divorcement of pipe lines from production and marketing would benefit certain elements and might benefit consumers. But the dismembered oil monopoly marketing division will still exert the same dehumanizing effect upon filling station operators and their employees. The dismembered monopoly will result in one more monopoly. We propose immediate action to correct a condition in the filling station business, daily becoming more difficult."

Railroads Favor Majors

Proposals for an agreement between the railroads and the oil companies under which the former were to readjust certain rate scales and discontinue the leasing of railroad property for filling station operations and the latter were to discontinue the use of trucks for deliveries beyond a radius of 40 to 50 miles from refineries and terminals and also were to refuse delivery in buyers' trucks, originated with the railroads and were rejected by at least two oil companies on the ground that they might contravene federal or state anti-trust laws, the committee was told October 13.

The views of the oil companies were reported to the committee by Edwin S. Hall, general counsel for the Standard Oil Company of New Jersey, after Eugene L. Orvis, Jersey City traffic consultant and lawyer, who on October 5 submitted copies of correspondence between oil company and railroad officials, had been examined at length. Orvis was recalled to the stand after the committee's staff had authenticated the letters of which he had previously submitted copies.

Orvis said that the carriers claimed the agreement never went into effect but charged that many of its proposals actually have been applied and that in the southeastern territory, for which it had been drafted, several suits have been brought against railroads by independent oil companies and motor carriers for damages under state anti-trust laws as a result of the alleged reduction of short-haul rates for the purpose of discouraging motor transport.

Oil operator asks for Federal regulation

With the declaration that wasteful methods of producing oil constitutes a theft of the heritage of future generations, and that unless stopped by federal regulation the United States' oil reserves will be exhausted much sooner than expected, Sam P. Shelburne of Oklahoma City, who has been a Mid-Continent producer for the past 22 years, last week asked Harold L. Ickes, secretary of the interior, to use the power of his department to stop such waste.

Shelburne's request was made in a letter to Secretary Ickes. A copy of the letter follows:

"Gasoline will be selling for $1.00 per gallon in 20 years, unless the oil industry is forced to stop its wasteful methods of producing.

"As an illustration, the Oklahoma City field alone has produced about 450,000,000 barrels of oil, which was sold at an average price of around 90 cents per barrel.

"In doing so, they wasted enough natural gas to heat and light the New England States for over 40 years. They wasted enough fuel oil to fire the boilers on every battle ship in the United States Navy for a period of five years. They wasted enough propane, butane and pentane to run all the automobiles in the State of Missouri for 10 years. They wasted raw materials from which enough rubber could have been made to supply Henry Ford for a year. They wasted basic ingredients from which enough alcohol could have been made to supply all the hospitals in the United States for 50 years. They wasted enough ice to cool every refrigerator car traveling on the railroads of America for 5 years. They wasted the materials from which enough paint could have been made to paint a three-foot strip around the world; and then left in the ground as much crude oil as they took out. This will never be produced.

"These are cold facts which must and will be admitted by every competent engineer in the United States. This tremendous waste was absolutely useless; and the Oklahoma City field is only one of several hundred which are doing the same thing.

"Unless the oil industry is forced to abandon such wasteful methods of production, gasoline will soon be too expensive for general use.

"We are a rich nation in petroleum now, but if we continue to ravage this important natural resource, we will be poverty-stricken soon.

"How was this gigantic waste accomplished?

"Billions of feet of natural gas, containing the ingredients above mentioned, was allowed to escape into the air, when it all could have been saved by piping it and storing it in old gas fields which had been depleted previously; several of which are within a comparatively short distance of the Oklahoma City field.

"Propane and butane are two of the finest motor fuels known, and are excellent household gases. They were permitted to escape into the air, where they can never again be recovered, for the reason that they could not compete in price with gasoline at 3 cents per gallon, which is approximately the price received for Oklahoma City gasoline and casinghead. Synthetic rubber, alcohol, paint, bakelite and over 25 other valuable necessities can be made from natural gas. Propane will both fuel and refrigerate a truck.

"The oil man is not entirely to blame. No one state can regulate the oil industry in such a manner as to stop this extravagant waste. Every day, Texas is blowing into the air enough natural gas to cook every meal and heat every home in the United States for a week. New Mexico and Louisiana are the next worst offenders, while all the other oil producing states contribute to the slaughter.

"Federal control can prescribe regulations which, if enforced, will stop this waste and preserve these vital necessities. Unless uniform regulation is enforced by the federal government, which is the only body that can enforce it, we will be facing a disaster within two or three decades.

"You, as Secretary of the Interior, are charged with the responsibility of protecting the natural resources of the country, the benefits of which accrue to all the people.

"These statements which I have made are pretty strong, but they are true. They warrant your full investigation. It is within the power of your Department to stop this waste.

"I respectfully call it to your attention."

Allowable Picture

New suit attacks East Texas proration method, and another expected; evidence heard in Humble's case . . . Allowables in several Texas fields increased

Humble claims East Texas order deprives it of oil

Evidence in Humble Oil & Refining Company's suit for an injunction to restrain the Texas Railroad Commission from enforcing the current oil proration orders in the East Texas field was heard in Houston October 12 by a three-judge federal court composed of Senior Circuit Judge Rufus E. Foster of New Orleans, and District Judges T. M. Kennerly of Houston and William H. Atwell of Dallas.

During the hearing the plaintiff introduced evidence and affidavits to support claims that it is deprived of oil given to other operators under the current proration schedules. The company owns 2545 producing wells in the field, of approximately 26,000 total wells; owns 14,691 productive acres, or a little above 11 percent of the total; has drilled one well to 5.8 acres on its leases, as compared with one well to 5.17 acres for the field as a whole, and one well to 5.1 acres for other operators.

Humble contended that while it owned 14.3 percent of all the oil in place in the field, it was allowed to produce only 11.15 percent of the daily allowable under existing orders. The company's daily allowable under the present orders is about 77,000 barrels, but it is asking for an additional daily production of 21,750 barrels, the prayer being based on the plaintiff's claim that it is being justly deprived of an opportunity to produce 3.15 percent of the allowable field production, to which it is justly entitled through virtue of having a full 14.3 percent of the total oil under its properties.

Stresses Oil in Place

The plaintiff stressed the significance of oil in place as a basis for daily allowable for various wells. Although Humble owns 11 percent of the producing acreage, its leases are located in areas having more than average sand thickness, it was shown. The average oil sand thickness for the field is 39.2 feet, but the average oil sand thickness under Humble Oil & Refining Company's leases is 51 feet, the plaintiff contended.

The plaintiff further contended that during the life of the field it had been deprived of the right to produce more than four percent of all oil recovered from the field under various proration orders, or a total loss of around 65,000,000 barrels in nine years. Evidence presented by the plaintiff showed that the East Texas field has about 5,200,000 acre feet of oil sand, of which Humble has well above 700,000 acre feet.

Attorneys for the Texas Railroad Commission offered affidavits to show that on a straight potential basis Humble Oil & Refining Company was getting almost its exact allowable under the present proration order. It was shown that the field has an hourly potential of 15,770,000 barrels, and that Humble's hourly potential was 1,757,000 barrels, or 11.14 percent of the total. It was contended that this checked closely with the 11.15 percent of the total oil given the plaintiff under current proration orders.

Order Helped Humble

The commission further contended that Humble benefited materially by the orders of September 11 and 29. It was shown by the commission's attorney's that under the order of June 19, the plaintiff obtained only 9.932 percent of the total daily allowable, but under the orders of September 11 and 19 the plaintiff obtains 11.15 percent of the total field allowable. The June 19 order was enjoined and an interlocutory judgment is now pending.

Under the June 19 order, which Humble Oil & Refining Company successfully attacked, the top field allowable was 522,000 barrels and the maximum average daily production for a weekly period was 380,000 barrels. Under the September 11 and 29 orders, the top field allowable is 690,000 barrels daily, the daily average production for a week must not exceed 445,000 barrels.

Humble contended that the top allowable was too high, and suggested a top average daily allowable of 500,000 barrels of fluid over any weekly period. Since the field is making about 150,000 barrels of water daily, such a maximum would reduce the oil production to around 350,000 barrels daily for a weekly period.

Attorneys for the railroad commission stated that Humble was getting 48 percent more oil under the September order than under the June 19 order, but added that the field allowable also had been increased.

Assisting Attorney General James P. Hart, representing the railroad commission, presented charts to show that oil migrates from the west side toward the east side of the field, and added that in the end the plaintiff would get its full share of production. He also stressed the importance of economic factors, and cited the plight of the small operator who could not operate with smaller base allowables. Hart said the commission was attempting to be fair to all operators and felt the current proration orders were equitable.

Discussion hinged for a time around the fairness of the 20-barrel base or minimum allowable granted each well that can make that much oil. The plaintiff clearly favored lowering the base allowable for all wells, and indicated the well allowables should be based more on oil in place. An inquiry from the court as to the desirability of a lower minimum well allowable found the plaintiff eager for use of any figure below the 20-barrel base now employed.

The railroad commission offered evidence and affidavits to support its continued use of the 20-barrel minimum allowed for the average small well. Many small operators would be forced to abandon their properties, under minimum allowables appreciably lower than those now in force, it was contended. The commission introduced more than a dozen affidavits to support its current order, one chart having shown the center and east side of the field as in line for a much longer life than the west side.

It was shown during the hearing that 25,346 wells in the field were capable of making 20 barrels or more daily, and that only 556 marginal wells were incapable of making 20 barrels daily. Since 513,478 barrels of the 690,000 barrels allowed daily fall to minimum or base well allowables 176,552 barrels are left for additions under the potential - bottom hole pressure - sand thickness formula. The plaintiff contends the minimum allowable does not give enough consideration to sand thickness, and too much to base allowables.

With no minimum allowables, but with only the potential-bottom hole pressure-sand thickness formula, the plaintiff contended it would get 14.6 percent of the field allowable. With a minimum or base well allowable of five barrels daily, it would have 13.6 percent of the total. With a seven-barrel daily minimum allowable, the company would get 13.7 percent, the affidavit by Ralph Schilthius held.

Attorneys for the railroad commission stated that in the end Humble Oil & Refining Company would get its full share of oil from the field, despite claims of current and past inequities.

The court asked attorneys for both sides to submit written arguments by October 16, and that the judges would try to give an early decision.

Humble Oil & Refining Company was represented by Rex G. Baker, Carl Illig, R. E. Hardwicke and John Rauhut.

The railroad commission was represented by James P. Hart, D. D. Mahon and Edgar Cale.

East Texas acreage proration attacked

Another suit attacking the East Texas proration order was filed in Federal Court at Austin last week. It was of unusual importance, not only because it further enlarged the possibility that the railroad commission might again have to revise its proration methods in the field, but due to the fact it represented the view of one independent who is a member of the large group allegedly penalized by an order based on acreage allocations, and because it charges too much weight has been placed on acreage and oil in place whereas a previous suit (filed by Humble Oil & Refining Company) alleges insufficient credit has been given to these very same factors.

Meanwhile, reports had reached Austin that another suit was contemplated. This time west edge operators in the field, who see the pressure dwindling and their wells going to water, were expected to attack the order because it permitted production at too high a rate from wells in the fairway and along the east edge, which alleges intensifiies the intrusion of water from the west.

F. W. Fischer, Tyler attorney and

producer who filed the new suit for himself, attacked the order as unfair because it gives more oil to wells of the same potentials on adjacent tracts (due to their spacing) than is given to his wells. Fischer complained especially because wells on his Eaton tract, 23 of them on 22.52 acres, have an allowable of about 22 barrels daily, while Humble Oil & Refining Company gets 32 barrels for wells nearby on wider spacing but whose potentials are in some instances lower than potentials of wells belonging to Fischer.

Favors Potential

"Proration on the basis of capacity of the wells to produce is the only fair and equitable method that can be pursued so as to permit each well owner to recover his fair share of the oil in the pool," is the conclusion which Fischer reached in his petition.

He declared the commission erred in including an acreage factor because "the propulsive force in the East Texas oil field is what is known as 'water drive,' that is, that the water pressure on the west side of the field drives the oil from the west to the east; and the plaintiff's tract, being situated in the center of the field where the structure is the highest and the sand section the thickest, to which the oil by nature being gradually driven from the west, he is entitled to produce from his wells upon said tract not only that which is estimated by engineers to have been originally under his tract, but, by reason of selection of his property high on the structure where the sand thickness is the greatest, he is lawfully and legitimately entitled to produce from his wells that oil which gravitates to his property or is driven to his property by the water drive present in said field.

"For, while the hydrostatic pressure in said field is driving the oil from the west to the plaintiff's property, it is, at the same time, driving the oil from under the plaintiff's property to those leases situated east of him. Therefore, the plaintiff is entitled to produce oil from his wells on said property as long as oil can be produced, and he is likewise entitled to produce his wells at the same rate that other wells of the same or similar producing capacity are permitted to produce." * * *

"The plaintiff makes no complaint against the order of the commission, insofar as it allocates 20 barrels to each well in the field that is capable of making 20 barrels or more, for to allocate a less amount to any well would result in waste, because a well cannot be operated on less than 20 barrels per day at the present price of oil, so as to return the investment of a well in the East Texas oil field and a fair interest return upon said investment.

"Therefore, an allocation of less than 20 barrels per well would result in premature abandonment of the operation of wells, and consequently result in waste.

"But the plaintiff alleges that that part of the order of the commission which distributes or allocates the field allowable, after deducting therefrom the aggregate of the 20 barrels allocated to each well, is unfair, unreasonable, arbitrary . . . "

Fischer asked that a three-judge court be assembled to hear his case, and that a preliminary injunction be issued fixing the allowable for his wells on the basis he outlined.

During the hearing in Austin on the Humble application for an adjustment of the East Texas allowable, Fischer vigorously attacked the plan to include an acreage factor in the East Texas proration order. At that hearing, Humble engineers testified that Fischer had produced from his Eaton lease twice as much oil as had been in place originally and that there remained in place now as much oil as there ever had been.

"I am the most efficient operator in the East Texas oil field," Fischer declared at the statewide proration hearing held subsequently. "I have produced twice as much as I had originally, the Humble says, and I have got it all left." This, Fischer insisted, was the acme of conservation.

Texas field allowables increased 48,517 barrels

The Texas Railroad Commission last week acted on several of the applications for increased allowables which had been heard since the statewide hearing on September 11. The grants total 48,517 barrels a day on a seven-day basis, and will, of course, be cut back since none of the fields were specifically exempt from Saturday and Sunday shutdown orders except the Panhandle.

At the time the order was announced for the month of October, the commission estimated that daily allowable for the state would be approximately 84,000 barrels beneath the estimate of consumer demand received from the Bureau of Mines. The new increases granted last week will average about 35,000 barrels per day, leaving some 49,000 barrels to be granted later or be withdrawn from storage. Applicants in some fields where requests had been rejected indicated they might file motion for rehearings as quickly as official denial orders were issued.

Listed below are the increases approved:

Field—	Old Allowable	New Allowable	Increase
North Ward	8,685	10,185	1,500
Keystone Lime ..	2,714	3,214	500
Gulf McElroy	7,394	8,394	1,000
Estes	10,029	11,529	1,500
Goldsmith	35,781	37,281	1,500
O'Hern	5,888	7,202	1,314
Turkey Creek	5,193	7,371	2,178
Novice	165	255	90
Akard	87	129	42
League City	1,777	2,500	723
Panhandle	88,241	107,841	19,600
Sand Hills	1,966	2,834	868
Waddell	2,310	2,810	500
Northwest	435	1,435	1,000
Manvel (Oligocene)	4,793	7,894	3,100
Church Fields ...	7,097	8,097	1,000
KMA	33,751	42,189	8,438
Hull Silk	1,642	2,053	411
Sikes	247	309	62
Marland-Finley ..	....	10,866	2,742
Appling, Bowles and View	....	....	499
Total			48,517

The Marland-Finley area in the Panhandle was given a 2700-barrel increase and set aside as a separate field. A hearing will be held in Amarillo on October 21 to determine whether this field shall be treated separately hereafter. Danciger Oil and Refining Company protested that the grant of 19,600 barrels increase to the remainder of the Panhandle area failed to take care of their needs and that they had a demand for an additional 1100 barrels daily.

At the same time, the commission announced that applications from several other fields had been rejected. Orders were to be issued on these later. Included in this group were the following: Rogers field, Montague County, 1000 barrels; Placedo, Keeran, Heyser, McFadden, East Placedo, and Greta in Victoria and Refugio counties, 100,000 barrels per month total; the Parr sand in the Benavides field, Duval County, 900 barrels per week; the Longhorn field, Duval County, 100 barrels per well for seven days a week; the Plymouth and East White Point fields in San Patricio County, 108 barrels per well, seven days per week; Loma Novia, Hoffman, and Clarkwood in Duval and Nueces counties, 175,000 barrels per month; the Saxet field, Nueces County, 8500 barrels, the West Bryson field in Jack County, 51 barrels; the Loving field in Stephens County, 55 barrels.

The commission held in suspense applications for the following increases: Eureka Heights field, Harris County, 1000 barrels daily; the Emperor field, Winkler County, 1810 barrels daily; the Dean Pool in Cochran County, 40 barrels daily.

Hearings on other applications have been held, but the commission did not indicate what disposition would be made of these.

The increases granted in the Panhandle and Manvel fields became effective on the morning of October 10, and the allowables for the other fields were raised effective October 11.

Texaco and Pure favor Illinois regulation

Expressions for an oil conservation law for Illinois came from two of the state's major producers last week. The Texas Company which is producing 56 percent of the Salem pool's output or 33 percent of the state's current production, and The Pure Oil Company, which started the current development campaign with a Weiler sand discovery well three years ago.

The Texaco Star, company publication, in discussing its Illinois activities, points out that Texas Company produces 107,000 barrels daily in the Salem pool and a total of 110,000 barrels in the state.

"Production in Illinois is not prorated," said the Star. "Because of lack of proration, with consequent unrestricted production, some of the development has been wasteful and uneconomic. The Texas Company would welcome state regulation that would curtail production and protect oil reservoirs from unduly rapid waste of reservoir pressures and too rapid an encroachment of water. A proration bill was introduced in the last session of the Illinois legislature, but died in committee after state-wide hearings were held. A special fall session of the Illinois legislature will doubtless be called and it is hoped that at this session an adequate proration law will be enacted."

"Reasonable regulations" in southern Illinois pools would result in large oil recovery and greater return to thousands of farmers and smaller interests in the field, said Henry M. Dawes, president of The Pure Oil Company.

"The problem that the state now faces in dealing with the situation is in its broad general principles identical with that which a number of other states have had to

cope with in the last few years," Dawes said. Failure to provide regulation, he added, would result in losses that would "rest most heavily on the thousands of farmers and other owners of lands and royalties which are productive, as well as the operators of small tracts who need protection from surrounding neighbors with greater resources at their command."

New Illinois association opposes control law

Revising a former stand, the newly organized Illinois Oil Producers Equity Association last week declared its opposition to inclusion of oil-control legislation in the special session of the General Assembly that Governor Henry Horner is expected to call this month.

The association had previously expressed opposition "to the consideration of any oil regulatory legislation in Illinois until its members and directorate have had adequate time in which to make a thorough investigation of producing and marketing conditions in Illinois."

This resolution was amended last week to read:

"That this association also recommend to the Honorable Henry Horner, governor of Illinois, that since there is no emergency in the Illinois oil industry, and since Illinois crude oil production is not now a threat to the stability of the national crude markets, and since it is the belief of this association that more study should be devoted to the actual needs of the Illinois oil industry by Illinoisans, that this association does not favor nor believe necessary the inclusion of oil control legislation in the forthcoming special session of the General Assembly."

Another resolution protested "as nonrepresentative of the will of the majority of the people of Illinois the substance of those petitions relative to oil legislation that are now reaching the governor."

Officers of the association, named last week, are George Harsh, Jr., Frontier Oil Company, Centralia, president; Ben N. Nation, National Oil Company, Fairfield, vice president, and Eddie Self, Walter Curry, Arthur "Tex" Harvey, Max Pray, J. W. Menhall, Ray Phebus, A. V. Howell, T. F. Thomson and Maynard Taxman, directors. Dorsey Hager, Centralia, is technical advisor for the group.

The next meeting has been tentatively scheduled for October 20, at which time Lieutenant Governor John Stelle, who has been one of the leaders in the campaign against a proration law for Illinois, is expected to speak.

November allowables for Michigan could be changed

P. J. Hoffmaster, supervisor of wells in Michigan, left the door open Monday for possible revision of field allowables in November, but vetoed suggested higher allowables for the present.

He called a public hearing of operators and purchasers October 25 to discuss and "submit evidence" either to tighten or relax the present 100-barrel per 10-acre unit allowables.

Hoffmaster said that while markets were materially improved and current production was slightly under the nominated demand, that increased allowables would endanger water encroachment and create waste under the 1939 law. Information from his department engineers, the supervisor said, indicated that water was coming in on the producing zones under proration.

The supervisor said a number of buyers had asked that allowables in certain fields be increased due to a shortage of crude. A petition signed by representatives of 2 Bloomingdale refiners and 8 operating companies asked that Columbia and Van Buren County's allowable be increased from 100 to 200 barrels per day per well.

Allowables for October in prorated fields were fixed as follows:

Walker, 151 wells, 450,249 barrels; Old Salem, 139 wells, 3,914,814 barrels; New Salem, 64 wells, 199,407 barrels; Columbia, 85 wells, 248,481 barrels; Freeman, 54 wells, 173,600 barrels and Redding, 55 wells, 331,700 barrels.

Wells completed after September 25, date of computing the allowables, will be allowed full production of 100 barrels per 10 acres, in addition to schedule.

Higher allowables asked for several Texas fields

Last week the commission again heard a series of applications for allowable increases. United Producers Oil Company asked for an allowable of 100 barrels a day for their two wells producing from the 3800-foot sand in the Bowers pool, Montague County.

Currently the wells produce 49 barrels daily with a gas-oil ratio of 250/1. The other two wells in the field produce from a shallower horizon. The additional oil would go to a refinery at Burkburnett.

The Texas Company asked for a net allowable of 38 barrels daily per well for their 30 wells in the Pickett Ridge field, Wharton County. This is an average increase of 10 barrels per well. The oil comes from a sand found at 4700 feet. Pressure in the field has dropped only 153 pounds since January, 1936, and 1,619,497 barrels of oil has been produced during the interval.

The Texas Company also requested a ten-barrel increase for 139 wells in the Withers field, Wharton County. These wells are allowed to produce 27 barrels daily now from a sand found at 5500 feet. Pressure in this field has dropped 48 pounds since September, 1936, and meanwhile a total of 2,566,190 barrels of oil has been withdrawn from the field.

Moutray Oil Company asked for an allowable of 12,000 barrels per month from the Appling, Bowles, and View fields in Jones and Taylor counties. The fields now produce 249 barrels per day. The extra oil would be used for a local refinery.

An increase of 90 barrels daily for wells in the Novice pool, in Coleman County, was requested by Coleman Refining Corporation. The four wells in the field are allowed 165 barrels daily now.

Producers in the North Thompson field, Fort Bend County, asked for an allowable of 200 barrels per well per day for each of 12 wells in that field. The current allowable is 124 barrels per well.

Production is from the Vicksburg at 7700 feet, and during the past few months, a pressure increase has been recorded. Gulf Oil Corporation would accept the additional production, the operators said.

The Coleman Refining Company also asked for an increase in the Akard field in Jones County. The allowable now is 87 barrels, and they asked that it be increased to 129 barrels, the oil to go to a refinery.

Phillips Petroleum Company requested that allowables for wells in the League City field, Galveston County, be raised from 64 to 124 barrels per well per day. Phillips will accept 4000 barrels of the oil, of which 2500 will be resold.

Texas statewide hearing October 17

The Texas Railroad Commission has scheduled its next statewide proration hearing at Austin, Tuesday, October 17. Because the stability of the industry has improved materially since the last hearing was held on September 11, and commission orders have indicated that production should be kept well within demand, the commission should face no crisis.

However, at that hearing, some discussion of the East Texas situation may arise, and operators who failed to obtain increases which had been requested may attempt to present them again there.

At the hearing on September 11, the commission announced a new policy which altered radically their old procedure. Prior to that time, it had been the custom for the commission to consider at statewide hearings matters pertaining to any oil field in Texas, but last month, Commissioner Jerry Sadler announced that hereafter matters involving particular fields would be considered at special hearings called for that purpose alone.

Hearings held subsequently—more than 30 of them—have dealt primarily with allowable adjustments or field rules. If this practice is continued, there should be a material reduction in the testimony adduced at the statewide meetings.

Because commission officials holding allowable hearings during the past few weeks have manifested unusual interest in consumer demand for Texas crude, as indicated by the Bureau of Mines, it is possible that more time will be devoted to this subject than has been used in the past. At these hearings, commission examiners have asked operators whether they thought the bureau estimates were the best index of market trends, and on some occasions have asked operators if they understood the methods used by the bureau in making these estimates.

While bureau officials have explained their plan of operation on two or three occasions, it is not too well understood by oil operators because of its complicated adjustments for current weather conditions and those of the future, the trend of automobile sales, the amount of gasoline and fuel oil on hand, exports and imports, and the normal adjustments taking place when markets from one state are invaded by a neighboring state.

The commission may take advantage of the opportunity offered at its hearing next week to give producers a better picture of this situation than they have now.

Market Situation

Pennsylvania gets its largest price advance in nine years . . . Michigan oil again selling for a dollar a barrel . . . Refined prices reflect improvement

Crude price increases feature strong markets

The advance of the oil industry's markets to higher ground, which has been under way for two months, still has not been interrupted; and further gains appear likely.

Last week's developments included moderate advances in crude prices throughout Michigan and in the Griffin pool on the Illinois-Indiana state line, while late in the previous week Pennsylvania grade crudes had been raised 25 cents a barrel.

The Michigan increases came only two weeks following an earlier advance for the fields of the southwestern part of the state.

These crude price advances represented a further phase of a gradual upward movement which earlier had affected some fields of southern Oklahoma, Arkansas, North Texas, Eastern Texas, South Louisiana, the Texas Gulf Coast, and Southwest Texas.

Mid-Continent Raise Promised

In view of these numerous, widely scattered increases, which in the aggregate have affected a large amount of crude production, it would not be surprising if a general Mid-Continent advance should occur in the near future.

When crude prices were lowered in the fall of 1938, the reduction took the form of sporadic local cuts and an eventual general Mid-Continent markdown.

Currently, that process possibly is being reversed, with scattered increases paving the way for a general advance.

Refined Oil Markets Strong

The strength of the crude market reflects continued brisk demand and further price advances for refined products.

The refined oil markets still are featured by noteworthy performance of lubricants and heavy fuel oils, although strength is displayed further by gasoline, heating oil, and some other products.

Following the sharp advances since mid-August, lubricants settled down somewhat during the past week, and prices became more stable at the relatively high levels to which they had risen. The 25 pour test 200 neutrals were quoted variously from 25 to 30 cents a gallon, and 25 pour test bright stocks were 24 to 30 cents.

Some further advances were made last week in prices of Diesel oil, particularly on the Gulf Coast, where $1.70 a barrel, in ships' bunkers, was generally quoted, while the highest asked price was $1.75.

Bunker oil also continued in strong demand on the Gulf Coast, meanwhile, at the improved prices of 90 cents to $1.00 a barrel, ships' bunkers.

In New York harbor, as on the Gulf Coast, quotations on bunker oil and Diesel oil are 20 cents a barrel higher than in early August.

Quotations on heating oils were higher last week than previously in various districts, including some Middle Atlantic and Middle Western points.

Kerosene also was marked up by some suppliers, particularly along the Middle Atlantic seaboard and in New England.

Prices of gasoline were generally unchanged in nearly all sections of the country, the gasoline market having continued steady but not buoyant, as have been markets for some of the other products.

Gasoline Prices

U. S. motor gasoline at Oklahoma refineries ranged last week about as follows: 62 octane and below, 4½ to 4¾ cents a gallon; 63 to 66 octane, 4¾ to 5⅛ cents; 67 to 69 octane, 4¾ to 5¼ cents; 70 to 72 octane, 5¼ to 5½ cents.

Corresponding prices in the Chicago market were: 4¼ to 4¾ cents, 4⅜ to 4¾ cents, 4½ to 5⅛ cents, and 4¾ to 5⅜ cents.

In East Texas 60-62, 400 end point gasoline was offered for 4¾ cents a gallon.

Natural gasoline, grade 26-70, was quoted in the Mid-Continent markets f.o.b. refineries at 4¼ cents a gallon, and sales were reported at the same price f.o.b. Breckenridge, Texas.

Kerosene Prices

Kerosene prices f.o.b. Oklahoma refineries ranged from 3½ to 4¼ cents a gallon for the 41-43 water white grade, and from 3⅝ to 4⅝ cents for the 42-44 water white grade; and corresponding prices in the Chicago market were 3⅜ to 4 cents and 3⅝ to 4¼ cents.

In the Chicago market range oil was priced from 3⅜ to 3⅞ cents a gallon. The No. 1 white oil was priced from 3⅜ to 3¾ cents, and No. 1 straw at 3¼ cents. No. 2 straw was 3⅛ to 3¼ cents. No. 3 oil was 3 to 3⅛ cents. No. 5 oils were 65 cents a barrel. The No. 6 oil was quoted at 40 to 45 cents.

NEW CRUDE PRICES

Middle West Prices

Lima, Ohio	$0.90	10-13-38
Illinois	.95	6- 8-39
Illinois Basin	1.05	6- 8-39
Centralia, Illinois	.95	9-13-39
Princeton, Indiana	.95	6- 8-39
Griffin, Sw., Ind.-Se. Ill., Sand	.95	10-10-39
Griffin: McClosky Lime	.85	10-10-39
Western Kentucky	1.00	6- 8-39
Birk City, Western Kentucky	.90	6- 8-39
Kentucky River, Eastern Ky.	1.10	6- 9-39
Big Sandy River, Eastern Ky.	1.02	6- 9-39

Michigan Prices

	Flat Price	Date Posted
Central (Basin):		
Porter, Greendale, Crystal, Wise, Midland	$1.02	10- 9-39
Buckeye, Edenville, Bentley, Beaverton	1.00	10- 9-39
Freeman, Sherman, Clare	.97	10- 9-39
Arenac, Ogemaw, W. Branch	.82	10- 9-39
Southwest (Shallow):		
Allegan, Kent Counties	1.03	10- 9-39
Van Buren Co., Bloomingdale	.98	10- 9-39
Zeeland	.85	10- 9-39
Bangor	.83	10- 9-39

Pennsylvania Prices

	Flat Price	Date Posted
Bradford Allegheny	$2.25	10- 6-39
National Transit Lines	2.18	10- 6-39
Sw. Pa. Pipe Line	1.90	10- 6-39
Eureka Pipe Line	1.84	10- 6-39
Buckeye Pipe Line	1.55	3- 6-39
Corning Grade, Ohio	1.02	1-24-39

Pennsylvania grade crude raised 25 cents a barrel

Purchasers of Pennsylvania grade crude, effective October 6, increased postings 25 cents a barrel, representing the largest single increase in the posted field price in nine years and reflecting a strong improvement in the market for this product. Current prices are at the highest level since late 1937.

New prices are: Bradford and Allegany districts, $2.25; Oil City district, $2.13 to $2.18; Southwest Pennsylvania, $1.90; Southeast Ohio, $1.80, and West Virginia, $1.84. Previous increases were made this year on January 21, February 1 and March 6; and the combination of four price advances lifted prices in the various districts from 56 to 62 cents a barrel.

Crude prices increased throughout Michigan

The first "dollar oil" in Michigan since October 14, 1938, resulted October 9, when general advances of 4½ to 8 cents per barrel were posted, affecting 95 percent of the state's 69,000-barrel daily output.

Pure Oil Company and Leonard Pipe Line Company led the advance in the Basin, followed by Simrall Corporation, affiliate of Standard of Ohio, Bay Pipe Line Company and other smaller carriers.

New postings in the Basin ranged from 4½ to 8 cents as follows:

Field—	Old	New
Porter-Greendale	.97½	$1.02
Buckeye-Edenville	.95	1.00
Wise	.95	1.02
Freeman-Sherman	.89	.97
Ogemaw-Arenac	.74	.82

Simultaneously with the advanced postings in the Basin, prices were pegged 8 cents a barrel higher in Southwestern Michigan's shallow fields,

where a 7-cent advance had been posted on September 22.

The new schedule in Southwestern Michigan, reportedly led by Naph-Sol Refining Company, but posted on the same date by Sohio Corporation (Tri-Lakes became Sohio October 1), Imperial Pipe Line Company, Leonard Pipe Line Company and Commonwealth, follows:

Field—	Old	New
Allegan	.95	$1.03
Kent	.95	1.03
Van Buren	.90	.98
Bangor	.75	.83
Zeeland	.77	.85

Districts in which postings hit $1.03 and $1.02 represent 27,000 barrels daily output and 97 to 99½-cent oil represents another 35,000 barrels daily.

Michigan prices are not posted on a gravity schedule but on a field basis, depending on pipe line outlets and relative values as determined by sulphur, etc. However, agitation has been growing for a shift to gravity schedules, which is favored by some carriers.

New Southwest Raise Surprise

While the 4½ to 8-cent advance in the Basin, which produces over 50 percent of the state's total and has some 70 percent of the known reserves, was expected, the 8-cent Monday advance in Southwestern Michigan came as a surprise in most quarters.

Since the development of considerable oil in the 1000-1900-foot Traverse zone in Allegan-Kent-Van Bureu counties, starting early in 1938, a differential ranging from 4 to 11 cents has prevailed between these shallow fields and crudes produced from the Dundee at depths of 3500 to 4000 feet in the Basin. The advances October 9 broke this differential for the first time, spotting some Southwestern Michigan crudes a cent over the top Basin price.

The Basin advance, which came 16 days after a 7-cent increase in the Allegan area, was expected to maintain the differential along with other causes. For this reason, many operators look forward to another Basin advance.

Leonard Pipe Line Company is the only carrier buying in both the Basin and Allegan area, and most of Leonard's oil now is purchased from the Basin. Leonard's entrance into the Kent-Allegan purchasing field in mid-September was regarded as a factor in the first 7-cent raise.

Discoveries Lagging

Crude under state proration is currently tight but would probably be firm without it. The rate of production in 1939 has been faster than the discovery of new reserves.

Michigan's known reserves were estimated at 42,749,000 barrels on January 1 this year, and as of October 1, production this year totaled 17,350,000 barrels. The current rate of production should bring the year output to an all-time high of around 23,500,000 barrels, to cut old reserves to around 20 million barrels.

Meanwhile, since January 1 no new important reserves have been uncovered. Development has centered around fields opened in 1938, which in two or three instances, has established a more extensive producing area than was known proven when the A. P. I. estimate was set up. Of seven new fields opened this year, none appears likely to materially alter the reserve picture.

The Kent or Grand Rapids field, with the 1900-foot Traverse lime zone the only known producing formation, now covers approximately 1600 acres and is estimated to have a known reserve ranging between six and 10 million barrels. It represents the chief new source of reserves, not estimated in the 1938 report.

Meanwhile, some of the other fields, developed in 1938, in particular a number of the shallow pools in Van Buren and Kent counties, probably will not recover the original estimates.

State proration, which became effective in June, and now is effective in Freeman-Redding, Allegan, Kent and part of Van Buren, applies to about 40 percent of the daily output, the rest being exempt as either settled or initially too low to come under the 100-barrel per 10-acre unit provision.

Trends of United States Production and Stocks

Figures are from American Petroleum Institute weekly reports, except those on crude stocks, which are from Bureau of Mines weekly reports

	Crude Oil Production (Barrels Daily)	Crude Runs to Stills (Barrels Daily)	Crude Oil Stocks (Barrels)	Gasoline Stocks (Barrels)	FUEL OIL STOCKS	
					Gas Oil & Dist. Fuels	Residual Fuel Oil
1937						
August 28	[5]3,731,450	3,425,000	309,506,000	66,997,000	112,111,000	
September 25	3,666,300	[5]3,455,000	307,974,000	65,620,000	116,472,000	
1938						
March 19	3,433,550	3,080,000	306,380,000	[10]93,192,000	122,067,000	
August 27	3,388,500	3,255,000	285,029,000	71,754,000	29,747,000	117,179,000
September 24	3,251,150	3,220,000	280,278,000	68,605,000	31,183,000	119,285,000
October 29	3,237,500	3,145,000	275,824,000	67,590,000	33,690,000	120,029,000
November 12	3,243,250	3,180,000	273,394,000	[6]67,551,000	34,175,000	120,491,000
November 26	3,260,900	3,295,000	270,563,000	68,628,000	33,749,000	119,885,000
December 10	3,245,100	3,150,000	[6]269,509,000	68,587,000	32,068,000	118,711,000
December 31	3,201,450	3,115,000	273,024,000	71,695,000	29,082,000	115,741,000
1939						
January 28	3,248,250	3,235,000	271,763,000	77,279,000	26,583,000	112,766,000
February 25	3,328,850	3,185,000	271,758,000	84,597,000	23,419,000	110,252,000
March 25	3,382,350	3,225,000	273,915,000	87,561,000	21,487,000	107,551,000
April 22	3,526,700	3,280,000	277,156,000	[2]87,769,000	21,058,000	105,035,000
April 29	3,568,200	3,405,000	278,440,000	86,794,000	[7]25,844,000	[7]108,409,000
May 6	3,580,900	3,275,000	[2]278,607,000	86,216,000	26,167,000	108,597,000
May 27	3,585,250	3,405,000	278,289,000	84,152,000	26,992,000	109,386,000
June 24	3,452,800	3,430,000	272,297,000	81,733,000	30,239,000	111,726,000
July 1	3,463,000	3,480,000	271,567,000	81,102,000	31,230,000	113,388,000
July 29	3,539,100	3,460,000	268,513,000	77,887,000	34,900,000	114,053,000
August 5	[1]3,909,400	3,445,000	268,982,000	76,431,000	35,601,000	114,512,000
August 19	2,480,550	[3]3,575,000	262,486,000	74,738,000	37,013,000	115,069,000
August 26	[10]1,690,800	3,475,000	246,982,000	73,475,000	37,722,000	116,237,000
September 2	2,283,200	3,375,000	236,643,000	73,194,000	38,228,000	116,022,000
September 9	3,228,650	3,380,000	233,826,000	72,244,000	38,136,000	115,656,000
September 16	3,422,350	3,470,000	233,016,000	71,869,000	38,394,000	115,230,000
September 23	3,681,050	3,570,000	[2]232,811,000	71,020,000	38,075,000	115,266,000
September 30	3,658,200	3,560,000	233,023,000	71,168,000	38,081,000	115,466,000
October 7, 1939	3,435,850	3,505,000	.....	71,152,000	38,549,000	114,397,000
October 8, 1938	3,249,350	3,205,000	[4]280,852,000	68,706,000	[8]	[9]
Change in past year	+5.4%	+8.6%	—17.0%	+3.6%	—3.2%	—9.1%

[1] All time peak. [2] Peak for 1939. [3] Lowest since April, 1922. [4] Stocks, October 1, 1938
[5] Peak prior to 1939. [6] Lowest for year.
[7] Prior to April 29, 1939, data did not include stocks at terminals, in transit, etc., except in California.
[8] Available data for year ago include only stocks at refineries, and not at terminals, in transit, etc., except in California. Those stocks on October 7, 1938, totaled 31,277,000 barrels, and comparable stocks on October 7, 1939, totaled 30,245,000 barrels, or 3.2% less.
[9] Available data for year ago include only stocks at refineries, and not at terminals, in transit, etc., except in California. Those stocks on October 7, 1938, totaled 120,405,000 barrels, and comparable stocks on October 7, 1939, totaled 109,453,000 barrels, or 9.1% less.
[10] Lowest since October, 1922, due to the shutdown of six Mid-Continent states

Crude marked up 5 cents in Illinois-Indiana field

Sohio Corporation, subsidiary of Standard Oil Company of Ohio, effective October 10 increased the posted prices of crude in the Griffin pool, along the Wabash River in Illinois and Indiana, five cents a barrel.

The increase brings the price of crude from sand horizons to 95 cents a barrel, and that from the McClosky lime to 85 cents a barrel.

Statistics show smaller well and refinery output

The latest statistics of the oil industry, covering the week ended October 7, reflected a sharp reduction of crude oil production, a material curtailment of refinery runs, and a resultant slight reduction of gasoline production. The lowered refinery output made possible a small but sub-normal withdrawal of gasoline from storage, and a million barrels of heavy fuel oil came out of storage, although those stocks were not excessive. However, about one-half million barrels of light fuel oils went to storage, a development that was desirable, as larger stocks are justified by the approach of cold weather and the anticipated strong demand for heating oils.

United States crude oil production came down 222,350 barrels to 3,435,850 daily in the week of October 7. That output was about 150,000 barrels under estimated market demand, but it was 5.4 percent greater than the production in the corresponding week last year.

Crude oil runs to stills declined 55,000 barrels to an average of 3,505,000 barrels a day, but were not greatly below the all-time peak, and were 8.6 percent larger than in the comparable week of 1938. Demand for all oils has been running about 6½ percent higher this year than last year.

Stocks of finished and unfinished gasoline in the United States were lowered only 16,000 barrels in the week of October 7, having come down to 71,152,000 barrels. That supply was 3.6 percent larger than the one held a year previously. The stocks were substantially larger than economically

desirable a year ago. However, the present even-higher stocks are not causing alarm, as demand for gasoline has been running about 5 percent higher this year than last year.

Stocks of gas oil and distillate fuels were increased from 38,081,000 to 38,549,000 barrels during the week ended October 7, after having been practically unchanged throughout September. The stocks of those heating oils now are 3.2 percent lower than a year ago, although demand is up about 15 percent.

Inventories of residual fuel oils were reduced from 115,466,000 to 114,397,000 barrels in the week of October 7, and then were 9.1 percent under last year's curve, although demand is up more than 10 percent.

Crude oil stocks in the United States rose 212,000 barrels to 233,023,000 barrels in the week ended September 30, after having hit a 17½ year low in the previous week. The crude oil inventory is 17 percent smaller than at this time last year.

Tulsa.—M. G. Jenson and P. W. Jenson are seeking permission from the Oklahoma Corporation Commission to operate a water-flood system in SE NE and the NE SE 31-24n-17e, Rogers County, Oklahoma. Seventeen producing wells make a total of 8 barrels per day from Bartlesville sand around 300 feet. Approximate thickness of sand varies from 30 to 40 feet. Only casinghead gas is produced and this is utilized for fuel and operating purposes.

Crude Production

Increase of 315,165 barrels brings United States daily average for last week to 3,745,965 barrels

UNITED STATES daily average production of crude oil rose to 3,745,965 barrels daily during the week ended October 14. Five days of production last week in Texas, against four the week before, and substantial gains in California, Oklahoma, and Kansas added 315,165 barrels to the average of the previous week. Production in the 8 prorated states was 156,498 barrels daily in excess of that prescribed by conservation program and 95,000 barrels daily over the Bureau of Mines estimate of demand for domestic crude. National production during the week was 155,665 barrels over the bureau recommendation.

Texas outturn jumped 247,150 barrels to 1,501,550 barrels, where it was 140,987 barrels in excess of the original October allowable, and 56,750 barrels over federal forecast. Production for the coming week will be on approximately this same level, and the following week will be reduced by 250,000 barrels daily.

California registered a gain of 25,150 barrels to produce 627,800 barrels daily. Central Committee recommendation and bureau prediction were exceeded; the former by 29,500 barrels, the latter by 33,000 barrels.

Oklahoma yield increased 22,865 barrels over the week before in reaching 425,190 barrels. This is 990 barrels over the state and federal allocations which were both set at 424,200 barrels.

Illinois output fell to 340,900 barrels daily; off 8250 barrels from the week before but still excessive compared to the government quota, which was over-run by 65,400 barrels daily.

Louisiana held about the pace of the preceding week, losing 1370 barrels in producing 254,425 barrels daily. This rate is within conservation limits by 4079 barrels and 5875 barrels less than that advised by the bureau.

Kansas produced 164,125 barrels daily, an increase of 20,050 barrels from the week before but still 6475 barrels within conservation and economic quotas, which are together at 170,600 barrels.

United States Crude Oil Production

Estimates Compiled by THE OIL WEEKLY

DISTRICT OR STATE	Bureau of Mines Estimate of Daily Demand (October)	State Allowable in Oct.	BARRELS DAILY FOR WEEK ENDED Oct. 14	Oct. 7
TEXAS—				
Texas Panhandle	.....	.....	65,350	57,750
North Texas	.....	.....	90,500	72,500
West Central Texas	.....	.....	32,050	26,100
West Texas	.....	.....	254,800	209,500
East Central Texas	.....	.....	92,450	78,500
East Texas Field	.....	.....	495,900	415,000
South Texas	.....	.....	236,500	197,950
Texas Gulf Coast	.....	.....	234,000	197,100
Total Texas	1,444,800	1,360,563*	1,501,550	1,254,400
CALIFORNIA—				
Long Beach	.....	.....	46,200	45,250
Santa Fe Springs	.....	.....	27,400	27,250
Huntington Beach	.....	.....	27,200	27,600
Dominguez	.....	.....	20,300	18,850
Ventura Avenue	.....	.....	36,400	36,750
Midway-Sunset	.....	.....	48,700	45,300
Kettleman Hills	.....	.....	51,100	51,750
Wilmington	.....	.....	87,100	87,150
Others	.....	.....	283,400	262,750
Total California	594,800	598,300†	627,800	602,650
OKLAHOMA—				
Oklahoma City	.....	.....	108,625	91,750
Seminole Area	.....	.....	104,890	96,125
Fitts	.....	.....	20,900	22,350
Others	.....	.....	190,775	192,100
Total Oklahoma	424,200	424,200	425,190	402,325
LOUISIANA—				
North Louisiana	.....	.....	66,975	68,850
South Louisiana	.....	.....	187,450	186,950
Total Louisiana	260,300	258,504	254,425	255,800

DISTRICT OR STATE	Bureau of Mines Estimate of Daily Demand (October)	State Allowable in Oct.	BARRELS DAILY FOR WEEK ENDED Oct. 14	Oct. 7
ILLINOIS—				
New Pools	.....	.....	332,800	341,250
Old Pools	.....	.....	8,100	7,900
Total Illinois	275,500	.....	340,900	349,150
KANSAS—				
Burrton-Haven	.....	.....	10,100	8,725
Russell County	.....	.....	26,925	17,500
Silica	.....	.....	11,350	8,675
Others	.....	.....	115,750	109,175
Total Kansas	170,600	170,600	164,125	144,075
NEW MEXICO	114,200	114,200	110,250	99,100
EASTERN STATES—				
Pennsylvania Grade	.....	.....	77,400	76,350
Others, Eastern	.....	.....	26,350	26,300
Total Eastern States	103,300	.....	103,750	102,650
MOUNTAIN STATES—				
Wyoming	69,000	.....	64,950	65,950
Montana	16,500	.....	16,350	16,400
Colorado	3,900	.....	3,700	3,700
Total Mountain States	88,400	.....	85,000	86,050
MICHIGAN	55,000	67,100	68,100	68,250
ARKANSAS	56,100	65,800	64,875	66,150
‡**Total 8 Prorated States**	3,120,000	3,059,267	3,215,765	2,892,350
Total United States	3,590,300	.....	3,745,965	3,430,800

* Daily average, considering 11 days of shutdown and water and Rodessa exemptions.
† Recommendation of Central Committee of California Oil Producers.
‡ Texas, California, Oklahoma, Louisiana, Kansas, New Mexico, Arkansas, Michigan.

Bureau's August report reflects production shutdown

Net effect of the August production shutdown in six Mid-Continent states in protest against a reduction in posted prices for crude was to reduce the daily average oil output for the month to 2,608,600 barrels, 970,000 barrels below the average for July, it was reported by the Bureau of Mines October 10.

The total production for the month was 80,865,000 barrels, compared with 110,937,000 barrels in July and 106,165,000 barrels for August, 1938, and was the smallest reported for more than three years.

"The shutdown in Texas, Oklahoma, Louisiana, Kansas, New Mexico and Arkansas was the outstanding event of the month, if not of the entire year," the bureau commented in its monthly production review. "The shutdown varied in length and intensity in the fields of the six states; the largest relative declines were in Oklahoma and New Mexico; the largest quantitative decrease in Texas. Michigan was reported as cooperating in the shutdown, but the daily average output (67,900 barrels) established a new record. The shutdown may have accelerated production in Illinois; in any event, the output reached a new peak of 317,800 barrels, or 36,000 barrels above the average in July.

"The shutdown was presumed to reduce crude runs to stills but actually the daily average rose to 3,472,000 barrels, or 24,000 barrels higher than in July. The decline in production and the gain in runs to stills resulted in an outstanding withdrawal from crude oil stocks, these being reduced about 32,000,000 barrels to 238,479,000 barrels on hand August 31."

As a result of the reductions in stocks occasioned by the shutdown, the bureau pointed out, stocks of all oils at the end of August represented only 128 days' supply, as compared with 146 days at the close of July and 150 days on August 31, 1938.

The report showed that the yield of gasoline rose 0.6 percent over July to 45.1 percent, while the yield of gas oil and distillate fuel oil apparently began its seasonal rise, being 12.3 percent for August compared with 11.9 percent the preceding month.

"The demand for motor fuel in August bore out the most optimistic predictions," the report stated, "both domestic demand and exports being higher than generally anticipated. The domestic demand was 53,728,000 barrels, the highest monthly total ever recorded, and an increase of six percent over August, 1938. Exports of motor fuel were 4,308,000 barrels, much higher than in July, but about a half million barrels less than a year ago.

"The total demand for light and heavy fuel oil in August, 1939, was about 10 percent ahead of last year, the pick-up in the residual fuel demand in July being sufficient to cause a draft on refinery stocks, the first since March."

Bureau of Labor Statistics figures placed the price index for petroleum products in August at 51.7 compared with 52.2 in July and 56.7 in August of last year. The crude-oil capacity represented by the data in the report was 4,121,000 barrels, giving an operating ratio of 84 percent, the same as in July but above the 80 percent recorded in August, 1938.

Details of supply and demand for the month as reported by the bureau are shown in the accompanying table.

August natural gasoline output registers drop

Production of natural gasoline in Auguest was seriously diminished as a result of the Mid-Continent field shutdown, daily average output being but 4,606,000 gallons as compared with 5,656,000 gallons in July, it was reported October 11 by the Bureau of Mines in Washington, D. C.

Total output for the month was 142,800,000 gallons against 175,350,000 gallons in July, it was stated. Aside from the shutdown, the bureau found, production in California and other areas increased during the month.

The shutdown also had an effect on stocks, the report showed, holdings at plants and terminals decreasing during the month from 179,928,000 to 163,296,000 gallons and those at refineries dropping from 119,238,000 to 114,912,000 gallons. The total of stocks on August 31—278,208,000 gallons—was 58,716,000 gallons under those of the same date last year.

Crude runs to stills increase in August

Daily average crude runs to stills in August were 3,472,000 barrels, an increase of 24,000 barrels over the July average and 203,000 barrels above the figure for August, 1938, it was announced October 11 by the Bureau of Mines in Washington, D. C.

Total receipts of oil at refineries were 103,517,000 barrels, of which 100,619,000 barrels were domestic and 2,898,000 barrels foreign, imports of the latter, averaging 93,000 barrels a day, showing a drop from the 95,000-barrel level of July.

Total crude runs to stills were 107,632,000 barrels and fuel and losses 213,000 barrels, making an excess of consumption over receipts which was reflected in a drop in stocks from 52,410,000 to 48,082,000 barrels during the month, the report disclosed.

Austin.—The Texas Railroad Commission has set a hearing for October 24, at Midland, to determine whether it should amend its order on the Goldsmith field, Ector County, providing for gas withdrawal from gas wells to be set on a volumetric-reservoir-displacement basis. This order was entered by the commission on February 22, 1939.

Supply and Demand of All Oils

(Thousands of barrels)

	August 1939	July 1939	August 1938	January-August 1939	January-August 1938
New Supply:					
Domestic Production:					
Crude petroleum	80,865	110,937	106,165	815,193	811,909
Daily average	2,609	3,579	3,425	3,355	3,341
Natural gasoline	3,400	4,175	4,226	32,425	33,272
Benzol[1]	210	191	133	1,414	1,019
Total production	84,475	115,303	110,524	849,032	846,200
Daily average	2,725	3,719	3,565	3,494	3,482
Imports[2]:					
Crude petroleum:					
Receipts in bond	552	395	192	3,246	1,957
Receipts for domestic use	2,346	2,539	1,522	18,206	14,969
Refined products:					
Receipts in bond	2,068	2,029	1,724	13,346	13,048
Receipts for domestic use	717	608	1,229	4,892	5,094
Total new supply, all oils	90,158	120,874	115,191	888,722	881,268
Daily average	2,908	3,899	3,716	3,657	3,627
Decrease in stocks, all oils	36,736	[3]2,271	4,711	32,376	[3]15,273
Demand:					
Total demand	126,894	118,603	119,902	921,098	865,995
Daily average	4,093	3,826	3,868	3,791	3,564
Exports[2]:					
Crude petroleum	5,969	7,304	7,003	48,222	54,430
Refined products	11,529	9,622	10,763	80,034	78,060
Domestic demand:					
Motor fuel	53,728	50,508	50,459	362,454	342,687
Kerosene	4,436	3,710	4,292	38,208	34,798
Gas Oil and distillate fuels	8,229	8,012	[4]7,847	82,586	71,080
Residual fuel oils	26,012	23,218	[4]23,665	205,998	186,134
Lubricants	1,963	1,982	2,002	14,998	13,750
Wax	73	62	81	603	721
Coke	844	454	473	4,638	3,485
Asphalt	3,532	3,048	3,201	17,131	15,936
Road oil	1,576	1,585	1,581	5,914	5,575
Still gas	5,925	5,920	5,753	43,883	41,751
Miscellaneous	211	182	158	1,506	1,207
Losses	2,867	2,996	2,624	14,923	16,381
Total domestic demand	109,396	101,677	102,136	792,842	733,505
Daily average	3,529	3,280	3,295	3,263	3,019
Stocks:					
Crude petroleum:					
Refinable in U. S.	238,479	270,570	285,640	238,479	285,640
Heavy in California	14,253	14,375	17,575	14,253	17,575
Natural gasoline	6,624	7,123	8,022	6,624	8,022
Refined products	262,738	266,762	268,022	262,738	268,022
Total, all oils	522,094	558,830	579,259	522,094	579,259
Day's supply	128	146	150	138	163

[1] From Coal Economics Division. [2] Imports of crude as reported to Bureau of Mines; all other imports and exports from Bureau of Foreign and Domestic Commerce. [3] Increase. [4] Revised.

American Gas Meeting

Need for more research and public relations work stressed by speakers at American Gas Association

More research into gas, the amazing potentialities of air-conditioning, better public and employee relations, better accounting methods and the need for more drama and more glamor about gas were important subjects at the twenty-first annual meeting of the American Gas Association. Held at the Hotel Pennsylvania in New York from October 9 to 12, registration climbed to a total of more than 2100 from all over the country. With the World's Fair in progress, delegates and their families visited the fair grounds on the opening day, heard a paper read on gas at both the great Fairs on the second day, and settled down to serious well-attended sessions for the duration of the convention.

Public Relations Discussed

Natural gas men met on the opening day and devoted their time to public and employee relations. D. M. Tharp, vice president and general manager, Ohio Fuel Gas Company, Columbus, Ohio, urged gas men to "Analyze, Organize, Deputize for Public Relations." He said: "Public relations that have been going hay-wire over a period of years cannot be improved in as many days or months." Public, employee, customer, stockholder and other relations, he pointed out, have existed a long time, but in the past have not been "so articulate and effectively influential."

Tharp said that his organization has been public relations conscious for a period of years, and progress of a definite character has been made in settling rate matters, grievances and gaining public favor. "We learned that company contacts with customers are 99½ percent satisfactory." A very high percentage commended the meter reader, service men, contact clerk and individuals of local management, but a major percentage condemned the company. Our surveys through mailed questionnaires and personal contacts indicated that a majority thought the price of gas too high, but only a small percentage had definite ideas as to what the rate should be. Our surveys also indicated opportunities for appliance sales and load building. "There is an even division of preference for gas and electric refrigeration in our territory with a margin of 20 percent of potential customers undecided. . . . We have learned very positviely that while doing a rather good job of selling appliances we have not made much progress in selling the value of gas as a fuel and service."

B. C. Adams of the Gas Service Company, Kansas City, Missouri, urged the golden rule in public relations. His definition of public relations was: "the true reflection of the integrity of an individual or a business or an industry in the eyes of the public." Explaining further, Adams said "that it doesn't make much difference what you do or whom you do it to; but if the act is one of friendliness and kindness, good public relations will result."

The Pacific Gas & Electric Company, San Francisco, has a personnel in excess of 12,000 working in metropolitan urban, rural territories and in the great valleys of the Sierras. R. E. Fisher, vice president, told the convention of his company's employee relations. There were ten points: (1) Employee welfare work through a committee elected by the personnel and in the meetings of which management joins as fellow workers; (2) Employee benefits including vacations with pay for general construction workers as with others, and sick leave up to two weeks after first year; (3) Liberal contributions by management to the Employee association; (4) Social contacts through picnics, banquets, parties; (5) Job training by various methods including the conference method, which was adopted in 1933 for public contact employees and field personnel, and a simplified information service to keep employees informed about the company; (6) Employee education apart from job training. "Pacific Service Employees Association" has comprehensive educational curriculum offering 57 technical and other courses; (7) Evaluating the capabilities of the individual; (8) System of appraisal of employee accomplishments; (9) Equalization of compensation by having standard salary ranges for various jobs; (10) Employee participation in business building, as result of which more than 30 percent outside the sales department have become active business builders.

Concluding, Fisher pointed out that "our primary problem is not what our industry can do for itself, but rather what service we can render to our customers and this, in turn, is contingent upon the attitude of our employees."

Air Conditioning Opportunity

A high point among papers on the second day was a talk by Allan W. Lundstrum of Ebasco Services, Inc., New York. In considerable technical detail he indicated the extent that summer air-conditioning offers an unparalleled opportunity for the gas industry. Based on estimates, he said there might be an addition of 350,000,000,000 cubic feet or about 25 percent to the natural gas load. It might, he suggested, be as much as $100,000,000 in added natural gas company income. For the entire industry he said: "Summer air conditioning might enable the

WALTER C. BECKJORD ELECTED PRESIDENT OF AMERICAN GAS ASSOCIATION

Walter C. Beckjord, vice president, Columbia Gas & Electric Corporation, New York, was elected new president of the A. G. A., with T. J. Strickler, vice president and general manager, Kansas City Gas Company, Kansas City, Mo., as first vice president, and George F. Mitchell, president, Peoples Gas Light & Coke Company, Chicago, as second vice president.

Ernest R. Acker, president, Central Hudson Gas & Electric Corporation, Poughkeepsie, N. Y., was reelected treasurer. In his brief report to the general meeting he pointed out there was $54,400 in the general fund at the end of the fiscal year, ended September 30, and for that year total receipts were $687,025 and expenditures were $676,134. A total of 539 had applied for membership in the year of which 466 were individuals and the rest holding companies and utilities.

Elected to the board of directors were: Frank H. Adams, president, Surface Combustion Corporation, Toledo, Ohio; James B. Black, president, Pacific Gas & Electric Company, San Francisco; Charles M. Cohn, vice president, Consolidated Gas, Electric Light & Power Corporation, Baltimore, Md.; H. L. Dickerson, Ebasco Services, Inc., New York; Leon B. Eichengreen, Philadelphia Electric Company; C. E. Gallagher, president, East Ohio Gas Company, Cleveland, Ohio; N. Henry Gellert, president, National Public Utilities Corporation, Philadelphia; R. H. Hargrove, vice president and general manager, United Gas Pipe Line Company, Houston, Texas; George S. Hawley, Bridgeport Gas Light Company, Bridgeport, Conn.; C. E. Paige, president, Brooklyn Union Gas Company; and Louis Ruthenburg, president, Servel, Inc., Evansville, Ind.

WALTER C. BECKJORD

gas industry to increase its sales each year by 55 percent and could bring in an additional annual net increase in revenues of $220,000,000." He continued: "The rich rewards that this holds out make worthwhile an intensive effort to develop this market." As a part of his paper he discussed the different air conditioning systems and stressed the smaller and more compact units for use today in which gas is or can be applied.

A symposium on "Gas in New Homes" was participated in by J. P. Leinroth, Brooklyn Union Gas Company, H. Vinton Potter, Oklahoma Natural Gas Company, Tulsa, and F. M. Banks, Southern California Gas Company, Los Angeles.

Leinroth stressed importance of gas installations in the newest homes as justified for two reasons: (1) It is good business; (2) Advertising and publicity value. People interested in new homes watch all improvements and when they are ready to buy or make a change they want what they believe to be most modern. He further pointed out that in these times of change, gas companies are faced with two trends in homes. They are steadily becoming smaller and lower priced and larger amounts are being expended on kitchens and bathrooms.

The problem in Oklahoma, H. Vinton Potter pointed out, is to make better and wider use in the home of gas through better equipment. Replacement of make-shift gas utilization devices has been important. In selling new water heaters it was essential to promote a finely insulated and automatically controlled unit to do so much more and do it so much better that the public felt it must have it in place of the make-shift. Speculative building is active, Potter pointed out, and this offers a special problem. The speculative builder is likely to spend far too much of his investment on the house and too little on the heating and plumbing. "We try to sell the builder and get the idea across to the architect," Potter said, "of spending enough for gas equipment and especially to install automatic water and other heating facilities." We pay our employees a bonus, he continued, to contact prospective customers for homes and see that they are sold the value of gas heat. The company has tied into the A.G.A. program, opened up model homes in and about Oklahoma City and now has one leading plumber alone who has equipped 75 new homes with gas heating and automatic insulated hot water heaters. Today, he said, the makeshift, uninsulated and unautomatic water heaters of three and even two years ago are disappearing rapidly.

F. M. Banks of Los Angeles, said that in securing more business it is necessary to deal with the fancies and notions of people as well as cold hard facts on costs and savings, a thought that was later developed even further in the speech of A. F. Rice of the same company. The public, said Banks, is interested in style and fashion as evidenced by the changing panorama of women's hats. It wants everything ultra modern and the "public must learn to realize that our service is modern as well as electricity." He, too, urged getting gas into new and model homes to set standards of excellence for many people. He pointed out that his company has participated in many model home showings including a "house of the week" that is selected and written about locally each week. Another promotional idea is an annual dinner for architects at which tickets are usually at a premium, a pamphlet for architects and one for builders, and even an annual dinner for home economics teachers in the schools.

Company Uses Meteorologist

A short history of natural gas in California and the status of distribution today, was presented by W. G. Vincent, Pacific Gas & Electric Company, San Francisco. "At present," he said, "over 99 percent of the gas customers in state are supplied with natural gas." He described an interesting use of weather forecasting by the Pacific company. With gas supply some 200 miles from meters, the company found it important to know weather in advance. It took eight hours for gas to flow the 200 miles and producers objected to making more than one change in delivery rate in 24 hours, although weather conditions affected consumption rate. From the United States District Weather Bureau following day's mean temperatures at a number of points along the line were secured and this enabled the company to foresee consumption rates. Later the company added a full-time meteoroligist. It was important, as for each degree difference of temperature below 65° F. demands for gas increased over 8,000,000 cubic feet per day.

"Air conditioning," said Vincent, "we believe, offers tremendous possibilities for the gas industry. I do not think it is possible to over-emphasize the importance to the gas industry of developing satisfactory air-conditioning units to fill the summer valleys in our load curves. Five test installations were made by utilities in parts of our state and records on these jobs have been kept over a period of more than a year. These indicate gas consumption amounts to approximately 30 cubic feet per ton-hour of refrigeration.

C. S. Goldsmith of Brooklyn Union Gas Company, and Roscoe D. Smith of Pacific Gas & Electric Company presented a paper on "Gas at the Fairs" stressing the promotional value of these expositions for increased use of gas and describing the problems of installation.

Frederick O. Hess, president, Sales Company of Philadelphia, said that an intense gas heat is now used to skin vegetables. "The heat is applied at such a rapid rate that the skin is burned away without affecting the interior of the vegetable." Apparatus used at present skins 2½ tons of vegetables hourly. From a gas utilization standpoint, he believes it is only a small step from peeling vegetables in this manner to ink drying.

War and Gas

Such contingencies of the war as can now be anticipated by the gas industry are being guarded against according to Alexander Forward, managing director of the A.G.A. He told the convention that any increase in general industrial activities resulting from hostilities will be reflected quickly in industrial gas sales and eventualy, though slowly, in domestic gas utilization. He warned that should the war continue heightened demand for coal, oil and other raw materials will tend to increase the cost of production of manufactured gas and to a lesser degree of natural gas.

"War today is largely a matter of mass production," said Walter C. Beckjord, newly elected president. He pointed out that the heat required in producing war equipment would be from coal, oil and gas, and that while gas costs would increase, its by-products useful in war would help offset this. "In the natural gas industry," he pointed out, "there will be some increased costs in the way of increased taxes, higher wages and rising commodity prices, but the natural gas companies will benefit from selling by-products at prices higher than those now existing."

It was A. F. Rice, market development manager, Southern California Gas Company, who with inspirational enthusiasm pointed to the need for gas men to dramatize and make glamorous, gas itself. "I am not," he said, "viewing with alarm and do not see the gas business at the crossroads." He urged, however, creation of a new industrial and public conception of gas. He saw opportunities through improved appliances to invade new fields such as that of home dishwashers with a new all-gas unit. Even such seemingly impractical items as gas-operated clocks and radios were to Mr. Rice an opportunity to associate gas with thoroughly modern things to its advantage in the public mind. Winter air-conditioning he saw as a gas job and also summer cooling. Above all, Rice wanted to create a new public conception of gas service, for progress in fine appliances is likely to be of little avail if custom has decided that it is not modern to use gas.

In this prestige building, he saw the need for more drama and more glamour that appeals so to the public. We must, he said, construct our sales story as we would have told it if gas cost more than it does. He urged dramatization of gas as the great servant of man. With no intent to engage in sloganeering, Rice pointed to the value of a few words such as "Gas Defies the Elements, Gas Defies Winter's Blockade, Gas Always Comes Through," or "Gas Refrigeration Is Safer Refrigeration."

Reporting for the committee of fourteen that has been studying the question of a research institution for gas, Frank C. Smith, president and general manager of the Houston Natural Gas Company, said the A.G.A. board had strongly endorsed the committee's recommendation for such an institution. The laboratory is not intended to compete with valuable work being done in the Cleveland laboratory of the A.G.A. Instead it will concern itself with pure research into gas as a raw material. Consultation with industries having such research institutions indicated that annual costs could range from $25,000 to as much as $200,000. The committee suggested $100,000 to provide an adequate program. This would be a small cost relatively, as average expenditures of companies in fields doing research are 1-3/10 percent of invested capital. The present plan of expenditure, said Smith, represents only 1/650th part of invested capital in the gas industry.

In his paper "Can Our Industry Advance by More Aggressive Industrial Gas Promotion," C. E. Bennett, presi-

dent, Manufacturers Light & Heat Company, Pittsburgh, pointed out the sales problem as appealing to the esthetic tastes of the housewife and selling her convenience, comfort, luxuary and economy, and on the other hand selling a fuel the value of which is dependent on what it will produce in comparison with other fuels.

In clarifying this second factor, Bennett showed how through increased efficiency of appliances, investigation of industrial uses showed that gas had become considerably more valuable in the past 10 years. His determinations were based on methods in use in 1929 and now, as well as knowledge of the art and changes in equipment and apparatus. They indicated in part that every 1000 cubic feet of gas is worth 45 cents now compared with 25 cents in 1929 for box annealing and for galvanizing; 38 cents now in contrast to 25 cents for brick burning and 61 cents now compared with 26 cents in 1929 for ceramic kilns.

Medals Presented

The doner of the McCarter medal, who is chairman of the board of the Public Service Electric & Gas Company, of New Jersey, presented medals and certificates to thirteen gas company employees for meritorious action in saving human lives from asphyxiation.

For the Gild of Ancient Suppliers, Griffin W. Gribbel, vice president, American Meter Company, of Philadelphia, presented the organization's first annual award. This is a group of men from all walks of life who have spent at least 10 years in the gas business.

The award was made for meritorious service to Raymond W. Connor, director, American Gas Association laboratory in Cleveland. It consisted of a small bronze statue of a workman entitled the "gas house terrier" inspired by the poem of that name by Walton Clark in 1895.

As the convention neared the end, one of the A.G.A. highest honors, the Charles A. Munroe award, was made to James F. Pollard, president, Seattle Gas Company, for outstanding contribution by an individual to advancement of the gas industry. It recognized his leadership in establishing the national advertising program of the association. Ralph Leslie Fletcher, vice president and engineer, Providence Gas Company, Providence, Rhode Island, was awarded the meritorious service medal. This was in recognition of his bravery, judgment and leadership in maintaining service of his company following the hurricane of September, 1938, in New England.

Highest technical recognition in the gas industry was conferred on E. G. Hammerschmidt, chief chemist, Texoma Natural Gas Company, Fritch, Texas. It was the Beal medal, for the best technical paper of the year. Title was "Preventing and Removing Gas Hydrate Formations in Natural Gas Lines," read at the annual meeting of the Natural Gas Section in Tulsa, Oklahoma, May 8 to 11 of this year.

Moffitt heads Ark-La Mid-Continent group again

All officers of the Louisiana-Arkansas division, Mid-Continent Oil and Gas Association, were reelected for 1940 at the annual membership meeting held in Shreveport October 12.

L. Mosely Moffitt of Triangle Drilling Company, Shreveport, was reelected president for his fourth year. Other officers reelected were: D. W. Harris, J. S. Hasson, Charles G. Laskey, J. R. McWilliams, and C. R. Minor, all of Shreveport, vice presidents; Arthur R. Campbell, Shereveport, secretary-treasurer.

Additional members for the board of directors of the general Mid-Continent Oil and Gas Association elected by the division were C. N. Black, A. R. Carmody, Tinsley Gilmer, and R. T. Zook.

Stripper well association meets October 17

Annual meeting of the National Stripper Well Association will be held in Fort Worth, October 17, in the Blackstone Hotel. This meeting will last one day with reports being given by Jake L. Hamon, Dallas, president of the association, Harold B. Fell, Ardmore, Oklahoma, executive vice-president and Howard J. Whitehill, Tulsa, secretary-treasurer.

Ralph T. Zook, Bradford, Pennsylvania, will speak on "Factors Which Determine Profitable Secondary Recovery." Zook, with Sloan and Zook Oil Corporation, has been a pioneer in secondary recovery methods.

Roy M. Johnson, Ardmore, has a paper on "The Necessity of an Adequate Price for Stripper Production." John Deman, Sedan, Kansas, will also speak on the program. This meeting is the start of a four-day gathering of independent oil men from all areas of the United States.

On October 18, 19 and 20, will be held the tenth annual convention of the Independent Petroleum Association of America.

Economic studies feature I.P.A.A. program

The Tenth Annual Meeting of the Independent Petroleum Association of America will be devoted largely to a study of the industry's economic and political problems, particularly from the standpoint of the independent operator. The meeting occurs October 17-20 at Fort Worth, Texas.

Besides numerous committee meetings, many of which will give reports of their activities, there will be a large number of addresses. The reports of the committees, most of which are on economic problems of the industry, are expected to be one of the highlights of the meetings, as they will include recommendations for curative measures.

The general problems of the industry and hopes of the association will be expressed by its president, Charles F. Roeser of Fort Worth.

Other addresses will include the following:

"Oil Tax Problems in the Next Congress," by W. A. Delaney, chairman of the Tax Policy Committee.

"Next Steps in IPAA Public Relations," by Burdette Blue, chairman, Public Relations Commitee.

"The Stake of the Royalty Owner in Oil Legislation," by James Hailey, chairman of the Royalty Owners Committee.

"Unnecessary and Unprofitable Drilling," by Edwin B. Hopkins, chairman, Sub-Committee on Unnecessary and Unprofitable Drilling.

"Report of Committee on Balance of Supply with Demand," by H. B. Fell, chairman of the committee.

"Regulation of Production by States," by Hon. Leon C. Phillips, Governor of Oklahoma.

"How to Increase Use of Domestic Asphalt," by T. M. Martin, vice president, Lion Oil Refining Company.

"Federal Conservation Act of 1939," a discussion led by Don Emery, vice president and general counsel of Phillips Petroleum Company, and George A. Hill, Jr., president of Houston Oil Company of Texas.

"Oil from the Standpoint of National Legislation," by Congressman Wm. P. Cole, Jr., of Maryland, chairman of special sub-committee on petroleum investigation.

Petroleum fluid meter conference postponed

The Petroleum Fluid Metering Conference, tentatively scheduled for November 2, 3 and 4 at the University of Oklahoma in Norman, has been postponed until sometime next spring.

A number of excellent papers have been contributed already, however, and there are a number of oil meter installations under observation. W. H. Carson, dean of engineering at the University, states he is sure the postponement will permit the offering of more material to the industry.

A. P. I. plans extensive annual meeting program

The preliminary program for the Institute's twentieth annual meeting, scheduled for November 13-17 next in the Stevens Hotel at Chicago, indicates that the affair not only will be the largest gathering of oil men this year, but also the most active in Institute history.

More than 3000 oil men are expected to attend the two general sessions, the 16 group sessions, and approximately 100 committee meetings. More than 50 addresses are scheduled on the speaking program.

An innovation this year will be convening during the Institute's sessions of an Interstate Conference on Automotive Taxation, sponsored by the American Petroleum Industries Committee. This affair undoubtedly will increase the attendance by bringing to the meeting automotive-equipment and tax experts, state officials, and members of the petroleum-industries committees from 28 states.

Another innovation will be the first annual reception and dinner of the petroleum industry's newly-organized 25-Year Club, which will be held Tuesday evening, November 14.

New importance is attached to the meeting of the Board of Councillors and to elections this year; because revision of the Institute's by-laws has placed membership of the Board of Directors at 110, plus ex-officio members comprising elected officers of the Institute, and a completely new board is to be elected on the basis of a revised schedule of representation. Eight national officers of the Institute, and 40 members of production and refining divisional general committees, also are to be elected.

Guest speakers for the Institute's general sessions include Dr. Joseph E. Pogue, petroleum economist for Chase National Bank, New York; Paul G. Hoffman, of the Studebaker Corporation, South Bend, Ind.; Barclay Acheson, associate editor of Reader's Digest, Pleasantville, New York.

Speakers at four sessions comprising the Interstate Conference on Automotive

Taxation include Dr. Finla G. Crawford, Syracuse University; Major Roy F. Britton, president, Automobile Club of Missouri; Francis Johnson, Iowa Farm Bureau Federation; State Highway Commissioner Murray D. Van Wagoner of Michigan; Ted V. Rodgers, American Trucking Associations; Fred A. Eldean, Tax Foundation; Dr. Roswell Magill, Columbia University; and Thomas H. MacDonald of U. S. Public Roads Administration.

Also Chester H. Gray, National Highway Users Conference; William L. Ayers, Chicago Journal of Commerce; Norman S. Taber, public finance consultant, New York; John D. Fitzgerald, Columbia Broadcasting System; Dr. Gustav Egloff, Universal Oil Products Company; Joseph L. McLaughlin, New Jersey Tax Department; Charles J. Yokom of Detroit; Dawes E. Brisbine, National Highway Users Conference; and Conger Reynolds. A fifth session of this group will be devoted to a round-table discussion.

Subjects to be considered at group sessions include automotive transportation economics, pipe line problems, fuels and lubricants, public relations, drilling practice and technology, production practices and problems, and refinery technology.

The Division of Production will hear such papers as: A Rational Expression for the Critical Collapsing Pressure of Pipe Under External Pressure; Collapse Data on Electric-Welded Pipe; A New Equation for Determining Collapse Strength; Combing Hoop and Bending Stresses to Establish Casing Collapse Pressures; Viscosity Determination of Sub-Surface Samples; Partial Volumetric Behavior of the Lighter Hydrocarbons in the Gas Phase; Results of Pressure Core-Barrel Tests; American Petroleum Institute-Bureau of Mines Pressure Core-Barrel Tests; Range of Application of Gas-Lift Methods; The Effect of Well-Bore Diameters as Observed in California Oil-Sand Reservoirs; Capacity Rating of Roller Bearings; and Protective Coatings.

Pacific Coast geologists meet October 9-10

The sixteenth annual meeting of the Pacific Section of The American Association of Petroleum Geologists will be held at the Ambassador Hotel, Los Angeles, California, November 9 and 10. Several geologists from the Mid-Continent region are planning to attend, including: A. I. Levorsen of Tulsa, past president of the association; President Henry A. Ley, Southern Cross Oil Company, San Antonio; and E. E. Rosairie, past president of the Society of Exploration Geophysicists, Houston.

The technical sessions include the following papers:

Thursday, November 9

Henry A. Ley, address of the Association president.
E. E. Rosairie, "Soil Analysis."
Also papers on "Heavy Minerals," "Present Ocean-Bottom Depths," and "Core Analysis."

Friday, November 10

Symposium, "Recent Developments."
Symposium, "The Eocene."

For entertainment, there will be a luncheon, Thursday noon in the Cocoanut Grove for members and guests, and the annual dinner dance will be held on Friday evening in the Fiesta Room. On Saturday, many will attend the Stanford-Southern California football game.

The following Los Angeles geologists have charge of the meeting: Albert Gregersen, The Texas Company, program; E. J. Bartosh, Bankline Oil Company, general arrangements; Roy M. Barnes and H. D. Hobson, both of the Continental Oil Company, president and secretary-treasurer, respectively, of the Pacific Section.

Fuel and lubricant engineers meet in Tulsa

Automotive engineers' contributions to national defense in the air and on the ground, are among the ten timely and important subjects crowded into the two-day National Fuels & Lubricants Meeting of the Society of Automotive Engineers, to be held at the Mayo Hotel, Tulsa, Okla., November 2 and 3, according to John A. C. Warner, secretary and general manager of the Society. Warner added that while this meeting is dedicated to petroleum engineers supplying the needs of the automotive industry, vehicle, aircraft, and tractor designers, fleet operators, and other automotive engineers, will find the papers to be presented important to them.

Brig. Gen. George H. Brett, chief of material division, Aviation Corps, United States Army, as principal speaker at the opening-day dinner, will discuss "Aviation —The Present Trend in Design and Size of Military Equipment." At a later session Col. A. W. S. Herrington, president, Marmon-Herrington Co., Inc., who recently returned from Europe, is expected to analyze "Military Automotive Equipment."

"Vaporization Characteristics of Motor Fuels," by R. C. Alden, H. M. Trimble, and M. G. Blair, Phillips Petroleum Co.; "Hypoid Lubricants," by Dr. C. F. Prutton and A. O. Willey, Lubri-Zol Corp.; "Observations on Tractor Fuels—Characteristics and Requirements," by E. L. Barger, Kansas State College, and "Automotive Maintenance Cleaning Operations," by H. Liggett Gray, Oakite Products, Inc., are other opening-day papers.

On the second day Prescott C. Ritchie, Waukesha Motor Co., will discuss "Oil Industry Power"; J. M. Davies, Caterpillar Tractor Co., "Power Applications for Movement of Earth"; and William T. Tiffin and Ottie Eads, University of Oklahoma, "Metal Cutting Tests Using Butane, Propane, and Acetylene."

A debate between students of the University of Oklahoma and Kansas State College on "Resolved: That V-Type Engines are to be Preferred to In-Line Engines for Passenger Car Equipment," climaxes the meeting.

B. E. Sibley, Continental Oil Co., a past vice-president of the Society, is general chairman of the meeting. Local arrangements are being made by William F. Lowe, secretary-treasurer of the Natural Gasoline Association of America.

Texas A. & M. College to hold gas-lift conference

The petroleum engineering department of the Texas A. & M. College will conduct a gas-lift production conference at College Station, Texas, on November 9, 10 and 11, 1939. A series of lectures are to be given by S. F. Shaw, consulting engineer, who has written many articles on oil field gas lift problems and practices, and who now is engaged in publishing a book on that subject.

The purpose of this conference is to bring together engineers and others who are interested in the production of oil by the gas-lift method, in order that they may hear a discussion by an expert of wide reputation, and to afford them an opportunity to meet with each other and exchange ideas on this very important subject.

No dormitory rooms are available on the campus for outside guests, but reservations may be made direct to one of the following: Aggieland Inn, College Station; College Courts, College Station; Aggie Auto-Tel, Bryan; La Salle Hotel, Bryan; Hotel Charles, Bryan. The city of Bryan is but five miles from College Station.

Meals may be had either at the college or in Bryan.

The program for this gas-lift production conference follows:

THURSDAY, NOVEMBER 9, 1939

Afternoon

1:00—Registration: Room 101, Petroleum Engineering Building. (No registration fee.)
2:00—Address of Welcome—Gibb Gilchrist, Dean of Engineering, A. & M. College of Texas. Room 140, Petroleum Engineering Building.
2:15—Development and General Principles Governing Gas-Lift Operations, Room 140, Petroleum Engineering Building.
4:15—Discussion.

Evening

7:30—Discussion of Lift, Submergence, and Lifting Efficiency, Room 140, Petroleum Engineering Building.
9:30—Discussion.

FRIDAY, NOVEMBER 10, 1939

Morning

10.00—Conference and round table discussion of gas-lift problems, Room 210, Petroleum Engineering Building.

Afternoon

2:00—Pressure and Its Effect on Gas-Lift Operations, Room 140, Petroleum Engineering Building.
4:00—Discussion.

Evening

7:30—Discussion of various types of gas-lift flow; straight, combination, intermittent flow, Room 140, Petroleum Engineering Building.
9:30—Discussion.

SATURDAY, NOVEMBER 11, 1939

10:00—Conferences and round table discussion of gas-lift problems, Room 210 Petroleum Engineering Building.
12:00—Adjournment.
2:30—Texas A. & M.-S. M. U. Southwest Conference football game. Tickets $2.50. Applications should be made direct to E. W. Hooker, Athletic Department.

Scientific exhibit planned for International Exposition

Members of the scientific and technical committee of the International Petroleum Exposition met Friday night, October 6, at the Tulsa Club to discuss plans for the various exhibits at the coming exposition to be held at Tulsa from May 18 to 25, inclusive.

Dr. Gustav Egloff, director of research, Universal Oil Products Company, Chicago, and co-chairman of the committee, discussed recent developments of some research phases pertaining to refinery products heretofore wasted and now being utilized. Namely, the application of coke in corrosion resisting equipment and the transition of waste refinery gases into synthetic glycerin. Both Egloff and W. G. Skelly, president of the exposition, gave reasons for the science hall being the outstanding exhibit of the show.

Members attending the meeting were: J. P. D. Hull, Ludwig Schmidt, Harry Kuhe, Paul S. Hedrick, Frank B. Long, Don R. Hinderliter, John Day, R. D. Shaw, E. R. Baker, Robert H. Wood, Dr. Egloff, Dr. C. K. Francis, co-chairman, Henry W. Boggess, Paul F. Lewis, W. A. Schlueter, Frank B. Tay-

lor, H. R. Powers, D. G. Hefley, Frank R. Clark, Dr. Ed Bloesch, W. W. Scheuman, Dean R. L. Langehein, Dr. C. W. Rippie and C. O. Willson.

Other members of the committee include: John W. Bates, Al Beekly, Mid-Continent Petroleum Corporation; Dr. E. R. Baker, Shell Oil Company; F. E. Holsten, Barnsdall Refining Company; D. K. Hutchcraft, Clark Engineering Company; A. J. Kerr, Pittsburgh Equitable Meter Company; Kent K. Kimball, Dr. K. S. Knappen, Gulf Oil Corporation; William F. Lowe, National Gasoline Association of America; Ralph Mathews, P. E. McKinney, Bethlehem Steel Company; C. V. Millikan, Amerada Petroleum Corporation; G. G. Oberfell, Phillips Petroleum Company, John E. Roth, Tide Water Associated Oil Company; Paul M. Raigorodsky, L. W. Shank, Ethyl Gasoline Corporation; W. W. Scheuman, Cities Service Oil Company; N. A. C. Smith, Bureau of Mines; H. M. Stalcup, Skelly Oil Company; E. H. Triphouse, Taylor Instrument Company; Arthur F. Truex, Sun Oil Company; H. G. Texter, C. A. Thomas, Monsanto Chemical Company, Dayton, Ohio; M. F. Waters, Hanlon-Waters, Inc.; B. B. Weatherby, Geophysical Research Corporation; G. H. Westby, Seismograph Service Corporation; W. K. Whiteford, British American Oil Producing Company; C. E. Wright, British American Oil Producing Company; and C. B. Mapes, Mid-Continent Oil and Gas Association.

Heaving shale researcher joins Texas University

Another research worker has joined University of Texas forces in its tussle with treacherous heaving shale formations of the Texas Gulf Coast oil fields.

He is Charles R. Houssierre, Jr., who is setting up his laboratory under the auspices of the University's Bureau of Engineering Research. Coming to Texas from the Massachusetts Institute of Technology, where he received his master's degree, he will be the first man to hold the bureau's fellowship for work on the shale problem.

H. H. Power, professor of petroleum engineering, who began experimentation on the problem last, heads a committee which will supervise Houssierre.

A.P.I. production nominating Committee is appointed

Appointment of the American Petroleum Institute's Division of Production Nominating Committee has been announced by George A. Hill, Jr., chairman of the division's general committee. The new committee will report at the Institute's Twentieth Annual Meeting at Chicago in November, naming members for the 1940 general committee of the division.

The membership follows: John A. Ritter, Sun Oil Company, Dallas, Texas, chairman; E. L. Adams, General Petroleum Corporation, Los Angeles; J. C. Askam, The Ohio Oil Company, Findlay, Ohio; J. A. Bermingham, The Texas Company, Houston, Texas; E. H. Blum, The Atlantic Refining Company, Dallas, Texas; P. H. Bohart, Gulf Refining Company, Tulsa, Oklahoma; Warner Clark, Standard Oil Company of California, San Francisco; J. S. Freeman, Skelly Oil Company, Tulsa, Oklahoma; W. E. Gilbert, Shell Oil Company, Inc., Los Angeles; D. R. Knowlton, Phillips Petroleum Company, Bartlesville, Oklahoma; Christy Payne, Jr., The Peoples Natural Gas Company, Pittsburgh; H. C. Pyle, Union Oil Company, Los Angeles; W. W. Scott, Humble Oil & Refining Company, Houston, Texas; C. S. Warren, Cities Service Oil Company, Bartlesville, Oklahoma; and Fred E. Wood, Standard Oil Company (Indiana), Chicago.

South Texas geological meeting October 21-23

Several hundred geologists and their guests are expected to attend the annual field trip and technical session of the South Texas Geological Society to be held in the Rio Grande Valley October 21-23, inclusive. Complete plans have been announced for the meeting.

The meeting will start with a field trip from Laredo to Brownsville on Friday, October 20.

Saturday will be occupied with a technical session at the Hotel El Jardin at Brownsville. The following program has been announced by Joseph M. Dawson, chairman of the program committee:

"Geological Work Shops and Show Rooms," by Henry Ley, president of the American Association of Petroleum Geologists.

"Association Affairs," by Ed. W. Owen, secretary of the A.A.P.G.

"Revision of a Portion of the Areal Geology Along the Rio Grande Southeast of Laredo," by Frith Owens, Nueces Royalty Company, Corpus Christi.

"Oil and Gas Fields of the Rio Grande Valley," by Lee Smith, Sun Oil Company.

"The Samfordyce Field, Hidalgo and Starr Counties," by E. L. Earl, Fohs Oil Company and F. W. Mueller, Skelly Oil Company.

"Economics and Evaluation of the Oil and Gas Fields of South Texas," by L. B. Herring, consulting geologist, Corpus Christi.

"Commercial Production of Synthetic Products from Natural Gas," by Harold M. Smith, chemist United States Bureau of Mines, Bartlesville, Oklahoma.

"Soil Analysis, with Particular Application to South Texas," by Eugene McDermott, Geological Service, Incorporated, Dallas.

On Sunday morning, Dr. W. Armstrong Price, consulting geologist of Corpus Christi will deliver a paper on "Physiographic Mapping of Quaternary Formations in the Rio Grande Delta."

Pipe Line Activities

Continental buys Crude Oil Pipe Line Company holdings

Purchase by Continental Oil Company, for several years a producer in Southwest Texas and Gulf Coast areas, of Crude Oil Pipe Line Company and related concerns was announced last week by J. G. Dyer, vice president in charge of production and pipe line for Continental.

The purchase included about 225 miles of pipe line, the main system of which extends from Corpus Christi through the Agua Dulce area to Loma Novia and other fields in Duval County, southwestern Texas; and a 500,000-barrel deep water terminal at Corpus Christi. Also included was a lease of 105 acres in the Conroe field, Montgomery County, on which there are five producing wells.

"The newly acquired system will be a common purchaser of crude in its connected fields, and will be expanded to meet situations as they arise," said Dyer. "Plans are now in preparation to increase the capacity of the main line by replacing 26 miles of it with new 8-inch line. The 26 miles of reclaimed 5½-inch line so obtained will be used to connect Continental's large property in Duval County, which is located 14 miles from the course of the main line."

Contract let for 19-mile 14-inch line in New Mexico

The Texas-New Mexico Pipe Line Company has awarded contract for building a 19-mile 14-inch crude line to complete its gravity gathering system that will supplement, or replace, pressure lines that serve all important fields in Lea County, New Mexico.

Installation of the gravity-flow system began last August with the construction of a 21-mile 14-inch unit, extending northeast from Jal station, NEc 5-26s-37e, thence northwest in the bed of a draw that provides drainage for the region. This completed unit, rated at 42,000 barrels daily capacity, was terminated temporarily near center of 35-22s-37e, being east of the junction of the Skelly and Penrose fields. The new project will continue the 14-inch carrier along the low contour lines of the draw to the company's pump station in the Monument field, SWc 31-19s-37e, where it will connect with a recently completed 20-mile 10-inch gravity line that serves the Vacuum field. A 16-mile 5½-inch gravity outlet for the Lovington pool also connects with the Monument station.

The Vacuum-Monument 10-inch unit, which has a capacity of 20,000 barrels daily, was placed in operation the past week. The company proposes to salvage an 8-inch line heretofore used in delivering Vacuum oil south to Lynch station, where connection was made with a 6-inch pressure line that also accommodates oil runs from Eddy County.

Capacity of the trunk line, extending south from Jal station via West Texas fields to Houston, is rated at 62,000 barrels daily.

Comanche states it is not common carrier

Comanche Pipe Line Company representatives appeared at a hearing before the Texas Railroad Commission last week and argued that the commission has no jurisdiction over the company's rates because it is not a common carrier. Some of the producers along the line had asked for a reduction in the 10-cent gathering charge which is made.

Attorneys for the pipe line company asserted that it was in fact an agent for the producers, that it neither bought, stored, nor transported oil, but gathered it only and delivered it to a purchaser.

The producers contended that the line was a common carrier within the purview of the statute because its charter granted it the power of eminent domain, and division orders prepared followed the usual procedure of pipe line operations. The full commission heard the argument and took the case under advisement.

WEEK'S DRILLING HIGHLIGHTS

Southwest Texas

Discovery of a new oil sand and a half-mile extension practically doubled the size of Ben Bolt, Jim Wells County. Rincon, Starr County, was being extended 18,500 feet northwest. Two Wilcox wildcats, one in Colorado and the other in DeWitt County, are having trouble with shale. A Pearsall lease purchase called for a 20-well drilling program.

Wyoming

Preparations are being made to test Jurassic saturation encountered on the northeastern end of Lance Creek structure. A Sublette County wildcat drilling below 9675 feet passed the state's previous depth record of 9348 feet. Four sands showed for production in a North Cut Bank well.

Texas Gulf Coast

Oil indications were found 300 feet above regular pay in a northeast flank test of Fairbanks. Lovell Lake was extended ¼ mile. A flank test at Esperson flowed 500 barrels from 7265 feet. Frio zone consisted of salt water sands in an outpost at Hastings.

Michigan

Bulk of the state's 45 permits went to Walker, where a north extension was recorded. Berea sand showed gas and Traverse lime oil and gas in a wildcat 15 miles northwest of Walker. A Porter Township exploratory test in Van Buren County logged an oil show at 1146 feet. The first Trenton lime production for Michigan was found in a Monroe County test.

West Texas

Seminole, Gaines County, has an offsetting program calling for 12 wells in addition to 5 drilling. Wasson's northwest sector was assured of a ½-mile north extension. A lower mid-Permian completion at North Cowden may cause exploratory drilling to that horizon in fields of that region.

New Mexico

Lea County's shallowest production was recorded in a 2627-foot wildcat. Vacuum's north end was extended east.

North Texas

Second completion of Consolidated pool, Wilbarger County, ran 220 feet higher than the discovery and was completed in the top section of the Strawn, whereas the discovery was finished in a lower pay.

Kansas

Wherry recorded a double extension—north and west, and a large gas well extended Cunningham ½ mile. Water in Arbuckle lime defined Geneseo on the northwest.

East Texas

Reservoir pressures in East Texas field dropped sharply with lifting of the 14-day shutdown. An outpost 1½ miles from Cass County's sector of Rodessa is flowing considerable wet gas.

Indiana

Aux Vases was added as the fifth producing horizon in Griffin. A Spencer County wildcat found free oil in Bethel sand but continued drilling toward McClosky.

Illinois

St. James' Weiler sand production was broadened ½ mile. Sandoval's northwest outpost flowed 1400 barrels, and a flow of 2200 barrels was obtained from a well ¾ mile from Dundas.

Oklahoma

Two new pools were reported. In Pottawatomie County a new discovery flowed 532 barrels initial, and in Oklahoma County damaged casing after shot delayed completion of a wildcat which flowed oil over the derrick. A small pool is indicated by a wildcat in Cleveland County.

Comparison of Permits Granted for New Wells

STATE	Week Ending Oct. 14	Total this Mo.	Total this Year	Total this Date Last Year	1938 Year Total
Arkansas	1	4	181	195	247
California	30	50	833	982	1,146
Louisiana	34	56	1,090	1,007	1,214
Kansas	42	76	1,208	1,258	1,453
Michigan	45	68	1,137	715	953
N. Mexico	*21	*41	*146	.....	.....
Oklahoma	44	92	1,607	1,647	1,978
Texas	116	289	7,992	10,440	12,369
Total	333	706	14,144	16,244	19,360

* Data on New Mexico permits prior to August 1939 not available.

Summary of Wells Completed in the United States Week Ending October 14, 1939

	Completions	Oil Wells	Gas Wells	Failures	Initial Production	Total 1939	Total this Date 1938
Alabama	....	....	....	....	.....	1	2
Arizona	....	....	....	....	.....	1	....
Arkansas	6	3	....	3	1,337	191	180
California	22	17	....	5	19,762	843	1,011
Colorado	....	....	....	....	.....	16	6
Florida	....	....	....	....	.....	....	....
Georgia	....	....	....	....	.....	1	1
Illinois	89	82	....	7	32,236	2,932	1,145
Indiana	11	6	....	5	2,977	189	96
Kansas	34	23	1	10	77,470	1,134	1,359
Kentucky	17	8	2	7	285	520	631
Louisiana	31	19	....	12	6,794	867	881
Michigan	27	14	....	13	6,840	1,162	753
Mississippi	....	....	....	....	.....	11	12
Montana	4	3	....	1	210	117	60
Nebraska	....	....	....	....	.....	1	1
New Mexico	22	18	1	3	8,218	515	425
New York	14*	14*	....	....	168	480*	555*
North Dakota	....	....	....	....	.....	....	1
Ohio	33	7	17	9	166	767	777
Oklahoma	52	35	1	16	6,509	1,623	1,754
Pennsylvania	26*	22*	....	4	32	1,244*	1,771*
South Dakota	....	....	....	....	.....	....	....
Tennessee	2	1	1	....	120	2	2
Texas	163	117	4	42	64,148	7,589	10,186
Utah	....	....	....	....	.....	....	3
West Virginia	16	2	12	2	505	437	557
Wyoming	6	3	....	3	4,132	113	85
Total this week	575	394	39	142	231,899	20,743	22,149
Total last week	572	404	34	134	194,286	20,168	21,666
Total this year	20,743	14,129	1,521	5,093	14,178,359	....	....

* Includes water-input wells.

Oklahoma Fields

Pottawatomie County discovery flows 532 barrels initial.

Oklahoma County strike delayed by accident to casing.

Oklahoma Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Caddo—		
Johnson et al, McKenna 27, se se ne sw 3-5n-9w	2052	3433
Magnolia, McKenna 1, ne ne nw se 11-5n-9w	120	4003
Carter—		
Shell, Ward 44, se nw ne nw 6-4s-3w	70	1175
Ward 45, ne se nw nw 6-4s-3w	12	1202
Creek—		
Dunn, Anthis 1, se nw se 34-14n-10e	80	3296
Strozier, Anthis 1, se ne se 11-16n-11e	25	1775
McAdams et al, Jackson 1, swc nw 31-17n-10e (otd 2715 ft)	62	2724
Rufly, McMillan 1A, ne se nw nw 26-18n-7e	*	525
Grady—		
Magnolia, Miller 1, nec 28-3n-5w (otd 1895 ft)	74	2480
Hughes—		
Smith et al, Scroggins "B" 2, nw sw ne 20-7n-8e	63	2950
Jackson—		
First Nat'l Bank of Altus, Stokes 2, swc 11-1n-20w	5	1518
Vaughn, Stokes 1, nw sw sw 11-1n-20w (otd 1420 ft)	8	1505
Cole et al, Cole 1, sw se se 34-2n-20w	*	1672
Kay—		
McBride et al, State 1A, sw ne ne 13-29n-2w	*	3872
Kiowa—		
Superior State 1, nec sw 35-7n-16w	*	1958
Lincoln—		
Wilcox, Furry 2, nw ne ne 21-14n-6e	50	3114
Elbar, Black 1, swc 32-16n-6e	8	4050
Muskogee—		
Pine, Stidham 5, ne sec nw 16-14n-17e	250	1953
Howard, Jefferson 1, 200 ft e c n½ sw 33-15-15e	*	1410
Ables, Harrison 1A, 130 ft s c n½ ne se 28-15n-16e	*	1612
Noble—		
Crosbie et al, Robbins 1, swc nw 6-22n-2w	*	5262
Okfuskee—		
Doak et al, Community 1, ne sw ne 16-10n-11e	65	2841
Seran, Seran 1A, sec nw 2-11n-8e	105	3433
Oklahoma Oil Co., Kaney 1, nw se nw 32-13n-10e	*	3655
Oklahoma—		
I. T. I. O., Watters 7, se nw ne 25-11n-3w	7	4094
Okmulgee—		
Moore, Lowery 1A, sw sw ne sw 10-15n-14e	*	1803
Osage—		
Sinclair Prairie, 70, nw sw se 12-21-8e	3	606
Tulsa Oil Corp., 2, se sw se 12-24n-8e	*	2300
Phillips, 16, nw nec 11-25n-11e	*	705
Pawnee—		
Johnson, Dick 2, se sw se 21-20n-9e	*	2406
Finley 10, se ne nw nw 27-20n-9e	60	2072
Payne—		
Home Gas, Mohler 1, ne nw se 35-18n-4e	¶6.9	3464
Pontotoc—		
Phillips, Norris 2, se ne sw 25-2n-6e (otd 4299 ft)	37	4439
Burke-Greis, Chambers 5, nwc 36-2n-6e (otd 4401 ft)	15	4470
Farmers Mutual, School Land 2, swc ne 16-5n-5e (otd 2450 ft)	*	2631
Sinclair Prairie, Rolls 13, c ne sw 28-5n-8e	4	855
Pottawatomie—		
Marshall, Manning 1, sec ne 24-6n-4e	265	2939
Iglehart et al, Boyd 1, nw sw se sw 28-7n-5e	566	4081
Magnolia, Fyke 4, sw nw ne 29-7n-5e	125	4166
Portable, Boyd 4, nec se 29-7n-5e	400	4166
Alma, Hughes 1, nec 33-7n-5e	*	4395
Smith, Sigmund 1, se ne nw 5-10n-4e	81	4483
Seminole—		
Iglehart et al, Kennedy 1, nwc sw 3-6n-5e	963	4064
Mid-Continent, Tiger 3, nw sw se 12-6n-5e	180	3789
Sunray, Collins 2, ne se sw 12-6n-5e	305	3821
Pure, Reed 3, se nw se 14-8n-6e (otd 4261 ft)	193	4277
Ligon et al, Logan 2, nwc ne 25-8n-7e	72	3300
Amerada, Lasley 1, 165 ft e ne nw sw 19-9n-6e (otd 4135 ft)	10	4152
Sequoyah—		
Western Oil Co., Williams 2, c s½ sw 21-12n-27e	*	2760
Stephens—		
Carter, Spears "B" 3, sw sec nw 15-1s-5w	6	742
Tillman—		
Oil Investment, Hamil 1B, ne ne nw nw 6-5s-15w (otd 2829 ft)	*	3353
Tulsa—		
Elting, Russell 1A, se se nw sw 26-19n-11e	168	854
Wagoner—		
Matthew et al, Marlow 2, se ne nw 30-17n-18e	*	145

* Failures; † Junked; ¶ Million cu. ft. gas.

Tulsa.—S. D. Butcher opened a new Hunton lime pool in Pottawatomie County, testing 532 barrels on an initial 3-hour gauge. Micklish 1, SWc NW 36-10n-4e, a mile and a quarter northwest of Earlsboro pool, perforated casing in Hunton lime at 4265 to 4283 feet with 107 shots. Flowing 211 barrels the first hour and 321 barrels the next two hours, settled production should average approximately 160 barrels hourly, gravity of crude being 40.8 corrected. Hole was drilled to 4532 feet in Wilcox sand which showed salt water. A semi-wildcat location was staked by Elmer Tanner at Johnson 1, SW SE SW 27-6n-3e, a ½ mile south of West Asher pool, Pottawatomie County.

Oklahoma County accounted for its sixth pool, 6 miles northeast of Nicoma Park pool. Hall-Briscoe, Incorporated, made a strike at Thompson 1, SWc NE 28-13n-1e, which headed several flows over the derrick from perforations in Cleveland sand at 4796 to 4808 feet. In two hours' swabbing test, 40 barrels were brought out. Pay was then shot with 10 quarts of explosive which damaged the casing and operators had to swedge the casing. Testing was resumed with the hole standing 3800 feet in oil.

A small pool was indicated for Cleveland County. Sinclair Prairie Oil Company reacidized Ward 1, SEc 30-7n-1e, 6 miles east of Lexington, with 10,000 gallons under an oil load. Previously the test was given 6000 gallons. In 24 hours it swabbed 106 barrels of oil from a plug-back depth of 6782 feet in Simpson. Two and one half-inch tubing was set to 6780 feet and casing cemented at 6415 feet in Viola lime. Wilcox sand showed salt water at 6838 feet. Norman sector in the same county saw renewed activity. Cleveland Oil Company and others staked location for Foster 1, NEc SE 17-9n-2w, a ½ mile southeast of Nels-Burton's Norman 1, NWc NE 17-9n-2w, and 1 mile west of Boggs 1, NEc 16-9n-2w, both wells making 39-gravity crude from Simpson as well as lots of water.

Gulf Oil Corporation extended Altus pool, Jackson County, a ½ mile southwestward. Enos 1, NW NE NE 16-1n-20w, topped Granite Wash at 1544 feet and drilled only a foot into the pay. Swabbing down to 1129 feet, the test gauged 1.66 barrels hourly and looks like a 50-barrel producer. Rowe sand production was moved 2 locations east in the Cement pool, Caddo County. Magnolia Petroleum Company's McKenna 13, SE NE SE 11-5n-9w, made a flowing potential of 2691 barrels daily from sand at 3276-3311 feet. Same pay was missed in Phillips Petroleum Company's Oaks 1, NEc SE 34-6n-10w, in the Cement pool proper. Operations were suspended at 3716 feet and hole will be plugged.

Near Madill, Marshall County, McGraw Oil Company and Johnson-Kemmitz Drilling Company's Godfrey-Neff 1, SW SE NE 14-6s-6e, 4 miles southeast of the pool, was checking favorable after Hunton lime was missed in the section. Woodford shale was topped at 1945 feet and Sylvan shale at 2318 feet. Drilling was reported below 2685 feet and nearing Viola lime.

Continental Oil Company's deep test in Washita County set 4779 feet of 7-inch liner at 14,490 feet and cemented with 600 sacks. Drilling passed through the cement and is now making new hole below 14,550 feet, being 10 feet below the old mark of 14,540 feet. Proctor 1, C NW 28-10 -20w, is 7 miles southeast of Elk City.

Kiowa County was disappointed again at Lewis et al's Rhyne 1, SEc 29-7n-17w, south of Hobart pool. It was abandoned in Simpson shale at 1191 feet. Eight miles southeast of the pool, Dillard Brothers staked location for Hobbs 1, SEc NW 35-6n-17w.

Midco Oil Corporation abandoned Tipps 1, NEc SW 17-22n-8e, 1½ miles north of North Boston pool, Osage County. Hole was bottomed at 3009 feet in Arbuckle lime. Only a small show was encountered in lower Simpson zone.

Sinclair Prairie Oil Company was deepening Charlson 4, NEc SE 22-5n-8w, Grady County, to get an increase in gas volume. At 3714 feet, gas was gauged around 2½ million cubic feet and the bit was rotating below 3735 feet. This well proved a new gas zone for the Chickasha gas pool. The company's German 1, SW NW NW 1-6n-13w, southwest of Carnegie, was drilling below 6935 feet in shale with nothing showing.

Grant County's deep test topped Mississippi lime at 5810 feet and was drilling. Magnolia Petroleum Company's Johnson 1, SWc NE 29-25n-8w, 3 miles northwest of Hillsdale pool, topped Oswego lime at 5350 feet, previously checking the Layton at 4924 feet.

Slow progress was being made at Anderson-Prichard Oil Company et al's Geis 1, C NE SW 15-18n-9w, 4 miles northwest of Loyal, cutting only 2 feet of hard Mississippi lime a day, lime being topped at 8196 feet.

W. R. Ramsey was less than 2000 feet from contract depth at Mansfield 1, C NW NE 16-14n-9w, Canadian

County wildcat. No important shows have been discovered and the test was below the 7000-foot level.

W. M. Dunn et al's Anthis 2, SW NE SE 34-14n-10e, near East Tuskegee pool, Creek County, set surface pipe and was drilling below 1300 feet, seeking Misener and Wilcox zones. J. R. Higgins' Worley 2, SEc SW SE 34-14n-10e, missed Wilcox sand production at 3298 to 3328 feet and plugged back to Misener from 3199 to 3206 feet. After shooting the sand, it flowed 50 barrels daily. In the same county, Fred Cusick was drilling below 1455 feet at Powell 1, NEc 35-14n-9e, southwest of Newby pool. Two dry holes are located just west of this test.

Kansas Field Developments

Carlock's two strikes extend Wherry north and west. Cunningham extended half mile by large gas well.

Kansas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Barton—		
Solar, Schartz 1, sec ne 18-16-11w	93	3327
Aylward, Wendtland 1, c e½ nec 4-17-11w	224	3345
Shell, Schneider "B" 1, nw nw se nw 16-18-15w	*	3628
Aylward, Dirks 1, c w½ swc ne 31-18-15w	163	3585
Coffey—		
Sackrider et al, Allen 1, csl se ne se 13-21-15e	*	2222
Cowley—		
Western Kansas O&R et al, Fergueson 4, ne se sw 21-30-8e	120	2992
McKnabb et al, Waite 4, ne se nw 28-31-4e	7891	3335
Pryor et al, Haney 1, c e½ se ne 8-33-6e	*	3538
Lowell et al, Olsen 1, nec se 13-35-7e	*	3241
Ellis—		
Cities Service, Colahan 2, nwc sw 24-11-17w	22,950	3449
Phillips, Hendrick 3, c s½ ne ne 13-11-18w	27,133	3364
Atlantic, Jensen 2, se sw sw 12-12-18w	948	3675
Doley, Joy 1, ne nw ne 14-12-18w	408	3676
Ellsworth—		
Continental et al, Buehler 3, csl se ne ne 33-17-8w	2001	3222
Greenwood—		
Mills, Pusey 4, sw se sw se 31-24-13e	8	1544
Harvey—		
Hipple, Frederick 1, nwc sw 17-23-3w	1329	3371
Pawnee—		
Texon et al, Dierks 2, sec ne 14-20-16w	*	3755
Pratt—		
Drillers, Gerber 1, c e½ e½ 35-27-11w	¶28	4142
Skelly, Crosley 1, ne ne se ne 17-28-11w	*	4337
Rice—		
Skelly, Smith 1, c s½ se ne 28-19-10w	2522	3035
Fain, Mattson 1, c n½ ne se 36-20-6w	*	3415
Bridgeport, Hauschield 6, c n½ sw ne 15-21-7w	585	3380
Garden, Hauschield 1, c e½ se ne 22-21-7w	671	3407
Rush—		
Crawford et al, Jones 1 nwc 35-17-16w (otd 3625 ft)	*	3615
Russell—		
Skelly, Carter 1, c n½ se nw 33-14-13w	318	2878
Aylward, Hall 2, c wl nw ne sw 22-14-14w (otd 3062 ft)	2564	3108
Phillips et al, Krug 1, se nwc se 15-15-14w	312	3276
Mollie 4, cwl nw ne ne 35-15-14w	226	3365
Coralena, Deines 11, nwc ne 36-15-14w	56	3293
Sedgwick—		
Simpson et al, Fisher 1, nwc ne 25-26-1e	*	3046
Stafford—		
Stanolind, Siefkes 5, c ne 3-22-12w	2304	3598
Harbeson 3, cwl sw se nw 11-24-11w	1884	3730
Hartnett 11, cn½ ne nw 13-24-11w	2760	3774
Woodson—		
Kilby et al, Stockerbrand 1, nw nwc sw 28-23-15e	*	1582

* Failures; † Junked; ¶ Million cu. ft. gas.

Wichita.—Wherry pool, Rice County, was extended north and west by two strikes. C. L. Carlock et al's Rennelett 1, SEc NE 36-20-8w, ¾ mile northwest of Wherry production, topped conglomerate at 3317½ feet and drilled to 3323 feet to make 75 barrels hourly on preliminary test. Standing with a hole full of oil and good gas pressure, a strong producer is expected. Carlock et al's Deweese 1, SWc NE 30-20-7w, a mile north and ½ mile west of Wherry, had saturated conglomerate at 3308½ to 3311 feet. When plugs were penetrated 3 feet, the hole quickly filled with oil.

Geneseo Defined

Herndon Drilling Company defined Geneseo, Rice County, when Durr 1, SWc 18-18-7w, ¼ mile northeast of production, was plugged after having water and some oil in Arbuckle lime when drilled to 3241 feet. A Rice County wildcat looking favorable 2 miles east of the Orth pool, was Fred Jones et al's Behnke 1, CWL SW NW 25-18-10w, which topped Kansas City lime at 2863 feet and set 8-inch casing at 2879 feet. At 2950 feet gas was estimated at 2,000,000 cubic feet, but the well will be deepened in search of oil. At the 2670-75-foot level, it made better than a barrel an hour. Location is on a prominent structural high.

Near Silica pool, Rice County, Myers and others plugged back to 3050 feet at Linville 1, SWc SE 4-20-10w. Drilled to 3390 feet in Arbuckle lime, the test was acidized in Kansas City lime up the hole with 1000 gallons for a showing of 45 barrels per day.

Cunningham oil and gas pool, Kingman and Pratt counties, received a ½-mile extension southward at Skelly Oil Company's Miller 1, CSL N½ NW 31-27-10w. Viola lime at 4062 to 4074 feet was acidized to swell the gas volume to 40,500,000 cubic feet daily. Prior to acidizing the open-flow potential was only half the final completion gauge. In the south extension area Skelly Oil Company's Steffen 1-A, C NE 31-27-10w, found Viola lime dry at 4302-15 feet and will probably abandon.

Kuhns, Funk and others may extend Canton North pool, McPherson County, ½ mile north; Wilson 1, SEc NE 26-18-1w, topped Chat at 2825 feet and drilled to 2862 feet to get a small fill-up of 50 feet of crude in the hole, along with some water. Equipment failure caused a suspension in testing, although the hole may be deepened. Westgate-Greenland Oil Company staked location for McCulle 1, C E½ SW 29-17-1w, 1½ miles south and 1 mile east of the pool, and for 2 other tests in the area.

Lone Producer Troublesome

Republic Natural Gas Company and Iron Drilling Company were experiencing trouble at Pospishel 1, NEc SE 20-17-15w, sole producer in Pospishel pool, Barton County. Hole was plugged back to 3565 feet from 3573 feet as the well began making 40 percent water with the oil. Scope of the pool was proven small by Iron Drilling Company's Krestin 1, SEc NE 20-17-15w, a north offset, which was abandoned at 3593 feet in Arbuckle lime with only a slight show of oil at 3583 feet. An east offset to the discovery was drilling.

Skelly Oil Company was drilling below 3645 feet at Koblitz 1, CEL SE NE 22-12-18w, a west offset to the only producer in Koblitz pool, Ellis County. The producer was drilled on a 10-acre block; Skelly's test is in the center of a 20-acre block.

Link Well Placed in Trapp

The Nomenclature Advisory Committee of the Kansas Geological Society placed Gulf Oil Corporation's recent Russell County strike in the Trapp pool. Everett 1, C W½ SW NE 20-15-13w ⅝ mile from Trapp pool and only ⅜ mile from Coralena pool, was believed to have linked the 2 producing areas. From 3320 feet in Arbuckle lime it established a potential of 119 barrels daily.

Russell County had 19 active tests. Stanolind Oil & Gas Company staked Michel "B" 1, C W½ NW NW 36-14-14w, ¼ mile east of Gurney South pool and ⅜ mile northwest of Michel pool. North of Gorham pool, Adam Klink et al's Brown 1, SE NE NE 31-13-14w, topped Lansing lime at 3018 feet and set casing at 3030 feet for a test. In the north extension area of Gorham, Spencer and Derby Oil Company made location for Atherton 2, C S½ NE NE 30-13-14w. Northeast of Gurney pool, Hartman, Blair and others abandoned Boxberger 1, C E½ SE NW 14-14-14w, at 3268 feet in dry Gorham sand. West of this failure, Alva Billings' Boxberger 1, NEc SE 21-14-14w, deepened from 3055 feet to 3116 feet and acidized with 7000 gallons to increase production.

Aylward Producing Company and others made location for Wiley 2, SEc NE 18-23-3w, a northwest diagonal offset to Carl Hipple's Frederick 1, Harvey County, a chat producer which extended Burrton pool ½ mile east.

Iowa-Kansas Oil Company moved in a rig at Beadmore 1, C E½ SE NE 10-9-16w, ½ mile west of Laton pool, Rooks County. Three locations northwest of Brandt pool, Butler County, Adair and Morton staked Cannon 1, NEc NW 15-28-7e. Earl Wakefield and others were rigging up at Steel 1, SW 2-32-6e, a mile north of Estes gas pool and 4 miles southeast of Burden oil pool.

Illinois Developments

Jointly supported Devonian test started in Avena. St. James pool Weiler sand production is extended.

Illinois Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Bond County—		
Joly & Jenkins, White & Bane 1..	*	2106
Clark County—		
Gooch et al, Davis 1	*	737
Clay County—		
Pure, J. M. Bissey 2.....	850	3100
Leon Clark 11	655	3090
Sol Smith 8B	360	3102
Sol Smith 9B	463	3128
Sol Smith 10B	472	3125
Centralia Ref. Co., Standard School 1	685	3098
Fayette County—		
Ohio Oil Co., Schwarm 1.....	80	1598
A. E. Schwarm 2	125	1598
John Kisteler 1	166	1598
Carter, Martin McClain 5	340	1585
Wilbur Hawkins 4	188	1576
Marion Finch 4	132	1540
Martin McClain 6	380	1543
Harley Yolton 4	184	1510
E. Hopper 7	192	1528
F. P. Sinclair 2	200	1607
May Taylor 1	340	1542
M. E. Hogan 3	78	1503
G. Webber 2	138	1560
E. Rhodes 1	384	1521
G. Blankenship 2	246	1588
May Durbin 2	228	1497
Mable Mills 6	316	1585
Edith Marshall 3	468	1581
Wm. Ireland 10	564	1528
Arthur Watson 5	892	1584
Redwine et al, Sealock 1.....	*	1586
W. B. Johnson, Deal 1.....	95	1526
Stewart Drilling Co., Hoover 2....	*	1592
W. C. McBride, Sapp 5.....	240	1552
Robert Markham et al, Rhodes 2..	120	1550
Robert Markham, Rhodes 2	95	1552
Hoss, J. Sealock 2A.....	100	1571
Shell, C. F. Fulton 11.....	76	1576
Van Buening 2	122	1576
Van Buening 3	45	1589
Whisenant et al, Lilly 15.....	824	1503
Jasper County—		
Von Huddleston, Fee 1	*	1957
Marion County—		
Texas Co., E. Farthing 5C.....	189	1892
City of Centralia 32	350	1800
J. Hamlin 2	182	2144
J. Chapman 15	224	2077
Mammoth P&R, Seibel 6.....	50	2132
Quisenbury, Hawkins 1	*	2948
Menhaul et al, Benoist 2 1448		2936
Benoist 3 4560		2942
Walker et al, Martin 1.....	30	2145
Johnson, Cole 4	485	2105
Magnolia Petroleum Co., W. O. Chitwood 35	570	2075
W. O. Chitwood 36	704	2070
Potter Bros., M. & I. R. R. 11A....	150	1884
M. & I. R. R. 12A	125	2106
Shell, Salem State Bank 6B.....	700	1855
Young 11	75	2063
Franklin Dr. Co., Hector 1.....	50	2127
Dunn & Daily, Lankford 1.....	78	1840
Marvel Oil Co., Roadway 2.....1320		2041
Rockhill Oil Co., Hanley 2.....	240	1855
Ohio, C. E. Lloyd 22	275	2068
C. E. Lloyd 23.....	322	2072
C. E. Lloyd 24.....	79	2065
Young 18	663	2044
Young 19	125	2080
Paul Rossi, Brooks 6.....1080		2055
Brooks 7	720	2055
N. Easley, Humes 1	*	2509
King Oil Co., Kagey Tr. 1.....	600	2141
Booth & Absher, McMakin 2.....	150	2144
McMakin 4	120	2149
Richland County—		
Pure, Storer-Sayre 1	17	2624
Wabash County—		
Olin & Hayes, Gray 1.....	57	2473
Tatum et al, Williams 1 2700		2418
Howell et al, Shultz 3	182	2488
Shultz 5	130	2484
Tide Water Associated, Elkins 1..	145	2456
Phillips et al, Schultz 2	298	2523
Schultz 3	564	2515
Washington County—		
Shell, Kozuszek 2	104	1276
Kozuszek 3	49	1282
Wayne County—		
Andy Bruner, Bothwell 2	154	3081
D. Davis, Carlson 3	51	3279
Robinson et al, Hornick & Murphy 5A	386	3423
Carl Robinson, Carson Oakley 2..	207	3428
Illinois-Mid Continent, Wilson 4...	450	3411
Rockhill Oil Co., Twist 3C.....	50	3356
Anding et al, Osborn 1.....	75	3425
White County—		
Riley & Lacy, Danby 1.....	110	3248

*Failures; †Junked; ‡Million cu. ft. gas.

Mattoon, Ill.—With a group of independent operators contributing bottom hole money, May Pray started Ferguson 1, NW NW NW Section 18-7n-3e, in the Avena pool of Fayette County. The wildcat will be carried to the Devonian, which on the basis of preliminary surveys is considered favorable for production. Acreage in the area is widely scattered among independents, and a deep lime strike would result in an extensive drilling campaign. Pray has figured in development of the Devonian pool near Sandoval, Marion County.

Parrott et al's Guffey 1, NE NW NW Section 1-5n-2e, extended Weiler sand production of St. James pool, Fayette County, 1½ miles southwest. It pumped 75 barrels in 14 hours on its initial test. One mile east, Conrey's Bert Smith 1, NE NE NW 6-5n-3e, Lone Grove Township, was spudded.

Sandoval Outpost Flows

Menhall-Benoist's Benoist 4-A, NE NW Section 8-2n-1e, in the northwest

NATIONAL BANK OF TULSA

TULSA, OKLAHOMA

STATEMENT OF CONDITION OCTOBER 2, 1939

RESOURCES

Cash and Due from Banks	$33,619,233.17	
U. S. Government Securities	14,650,295.26	
Other Bonds and Warrants	6,040,669.38	$54,310,197.81
Loans and Discounts		16,645,348.40
Overdrafts		1,432.96
Income Receivable Accrued		151,554.75
Stock in Federal Reserve Bank		180,000.00
Bank Premises		3,104,166.66
Customers' Liability under Acceptances		2,704.50
TOTAL		$74,395,405.08

LIABILITIES

Deposits		$67,570,890.54
Acceptances Executed		2,704.50
Income Collected not Earned		52,892.00
Reserve for Interest, Taxes, etc.		49,969.58
Reserve for Preferred Dividends		7,666.66
Capital—Preferred	$1,000,000.00	
Capital—Common	2,500,000.00	
Surplus	2,500,000.00	
Undivided Profits and Reserves	711,281.80	6,711,281.80
TOTAL		$74,395,405.08

The Oil Bank of America

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corner of the Sandoval pool, flowed 1400 barrels on its initial 24-hour test without treatment. The outpost is producing from a Devonian pay section, topped at 2925 feet. Successful completion of the well, located ½ mile northeast of a dry hole, gave strength to the belief that development would reveal a northwest-southwest trend to the deep lime pool.

Other operations in this pool included: Big Four Oil & Gas Company's Chaffin 2, 73 feet from the north line and 365 feet from the west line, NE NW 9-2n-1e, completed as a flowing well with no gauge of production; Big Four Oil & Gas Company's Dean 1, SE SW SW 4-2n-1e, shut down for orders; Big Four Oil & Gas Company's Dean 2, SW SW 4-2n-1e, drilling at 2650 feet; Menhall and Gulf Refining Company's Goodman 1, NE NW SE 8-1n-2e, working to shut off water after flowing 300 barrels a head, 17 percent water; Menhall and Gulf Refining Company's Goodman 2, SE 8-2n-1e, set surface casing; Taylor & Kemmel's Kennedy 1, SW SE SW 4-2n-1e, derrick; Blalock's B. J. Robinson 2, SW NE SE SW 4-2n-1e, drilling plug; Blalock's B. J. Robinson 3, SE SW 4-2n-1e, drilling at 500 feet.

Joe Miller's Foster 1, NW SW SW 11-1n-2e, east outpost to Lake Centralia-Salem pool, was waiting on orders after deepening with cable tools from 2242 to 2272 feet. Miller was considering moving rotary tools back to the test to continue to the Devonian.

Shell Oil Company's Dunbaf 1-B, SE NW NW Section 11-1n-1w, ¾ mile west of production in Centralia pool, was abandoned after drilling through McClosky below 1600 feet. The rotary rig, a portable, was moved to the Lutz farm between Patoka and Sandoval, Marion County, where Shell drilled its first dry hole during the current campaign. The new test will be carried to the McClosky.

A ½ mile northeast of Pure Oil Company's Homer C. Coen 1, Dundas pool discoverey, this company completed Emma Kropp 1, Section 31-5n-10e, Preston Township, Richland County, with an estimated initial production of 2200 barrels daily. It was the largest completion of the week in the deep part of the basin, and the test was made after a plug-back in the McClosky from 2902 to 2891 feet.

Ohio Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Athens County—		
Gross & McCune, Antle 1	25	3384
E. Butts, Butts 1	¶.20	1456
D. T. Ordoff, Keirns 2	¶.07	1431
Coshocton County—		
Leonard O&G Co., Ashcraft 3	100	3198
Warsaw O&G Co., Fisher 1	¶.03	3399
Cuyahoga County—		
Benedum & Trees, Scheuring 1	¶1.50	2906
Fairfield County—		
City Natural Gas Works, Boyer 1	¶	2200
Guernsey County—		
Purdy Prod. Co., Spencer 1	¶.06	1606
Harrison County—		
N. L. Stevens Co., Sampsel 1	5	1718
Jackson County—		
Kelch Bros., Dye 1	¶.05	835
Jefferson County—		
Ellis et al, Letfor 8	*	1300
Knox County—		
Wallsmith et al, Buey 1	5	3055
Scott et al, Buey 1	*	3112
Ohio Fuel Gas Co., Smith 1	*	2965
Licking County—		
Buy Shrider, Dugan 1	¶2.30	2664
Shrider & Rubin, Hughes 2	¶2.00	2590
Allen Willey, Miller	¶1.40	2592
Murphy & Emerald Pet. Co., Swisher 2	¶.75	2586
St. Albans Co., Barner 1	¶.04	814
White & Vandergrift, Dawes 1	*	2556
Lorain County—		
P. F. Cain, Clark 1	*	2350
Medina County—		
Dymo Oil Corp., Ripley A-18	5	579
Edson & Son, Aetna 1	*	2976
J. H. Wilt, Burnham 1	*	483
Meigs County—		
McKnight & Co., Frame 1	¶	870
Monroe County—		
Simmons Co., Simmons 1	¶.82	1368
Muskingum County—		
Swingle et al, Bussemer 1	25	4259
Atha Realty Co., Gibson 2	*	772
Noble County—		
Ohio F. G. Co., Muskingum Water 2	¶1.34	1398
Perry County—		
Thistle Oil Co., Ketcham 2	¶.90	3456
Corning Prod. Co., Ketcham 3	¶.80	3755
Tuscarawas County—		
Lyons Co., Espenschied 1	*	4592
Washington County—		
Harris et al, Clift 1	1	775

* Failures; † Junked; ¶ Million cu. ft. gas.

West Virginia Completions

Company, Well and Locations	Init. Prod. Bbls.	Depth
Braxton County—		
Pittsburgh & W. Va. Gas Co., Hall 7695	¶.70	1990
Cabel County—		
Merritts Creek Gas Co., Braley 1	¶.12	2929
W. Virginia Gas Co., Nicely 1	¶.09	3374
Wilson et al, W. H. Birch 1	¶	3908
Calhoun County—		
McCall Dr. Co., Gainer & Wigner 2	¶.80	2135
Clay County—		
Pittsburgh & W. Va. Gas Co., Lirk 7691	¶1.25	1742
Gilmer County—		
Gilmer County Gas Co., Collins 1	¶.25	1845
Hancock County—		
R. J. Braden Co., F. Porters 1	*	986
Kanawha County—		
United Fuel Gas Co., Beave 1	¶5.41	4840
B. C. Gillespie 1	¶.73	5265
Brawley Reid O&G Co., Campbell 1	¶3.18	5262
Ritchie County—		
Hope Const. & Ref. Co., Hammett 2	500	1866
R. H. R. Oil Co., Jackson 4	5	1852
Gerald, D. Jones, Gandee 1	¶.20	1725
Tyler County—		
Howard Hall, Broughman 1	*	1862
Wayne County—		
Southern W. Va. Gas Co., Prichard 22	¶2.60	1340

* Failures; † Junked; ¶ Million cu. ft. gas.

Kentucky Fields

Two important wildcats abandoned during week

Owensboro, Ky.—Two wildcat failures marked Kentucky oil activity last week.

In Hancock County, W. J. Flesher's Cal Young 1, 1500 feet from the north line and 2400 feet from the east line, Section 1-P-33, topped the Ste. Genevieve at 763 feet, had a non-commercial oil show in the McClosky between 878 and 884 feet, and was abandoned at 1464 feet.

C. L. Trusler's Robert Schroader 1, 450 feet from the north line and 2710 feet from the east line, Section 3-L-33, was abandoned at 956 feet.

New starts of the week were South Penn Oil Company's E. R. McPherson 1, 450 feet from the west line and 140 feet from the south line, Section 13-H-32, Butler County, moving in material, and A. D. Schaeffer et al's Dr. Meddey 1, 144 feet from the west line and 1001 feet from the north line, Section 3P-29 Daviess County, shut down at 50 feet.

Martha hearing

The Texas Railroad Commission has scheduled a hearing for October 20, at Austin, to consider operating rules for the Martha field, in Liberty County.

Indiana Fields

Fifth producing horizon added to Griffin pool

Evansville, Ind.—The Indiana side of the Griffin pool, which two weeks ago saw production from only three formations, added a fifth horizon last week with the near completion of Robert Brothers' Keck Estate 1, NW NE NW Section 34-3s-14w, Bethel Township, Posey County, in the Aux Vases sand. Early production on the Indiana side of this pool had been from McClosky, Cypress and Waltersburg, and a week ago the Tar Springs was added to the list.

The well was bailing free oil, with about 1000 feet of water-free fluid in the hole.

John Knapp's Trent 1, wildcat in NE SW 11-5s-6w, Jackson Township, Spencer County, reported some free oil in the Bethel sand, and was drilling ahead to test the McClosky. A new wildcat start in this county was Kelly et al's Eberhard 1, NW NW SW 9-6s-4w.

The first deep test for eastern Gibson County was announced for the W. A. McRoberts farm, ¾ mile northeast of Mt. Olympus, near the Pike County line, by E. M. Shirley. It was drilling with cable tools below 500 feet, and will be carried to the Devonian. Two other wildcat starts were recorded in this county: Newton Pipe Line Company's

Indiana Completions

Company, Well and Locations	Init. Prod. Bbls.	Depth
Adams County—		
Haugh et al, Haugh 1	4	1000
Delaware County—		
W. E. Black, Thomas 1	*	1500
Gibson County—		
Continental, Bozeman 4	900	2515
Cooper 4	43	2879
Lewis Prod. Co., Cooper C-2	650	2519
Martin County—		
Montgomery, Salmon 1	*	47
Marion County—		
C. E. Jefferson, Hoover 1	*	965
Perry County—		
E. Dice, Knable 2	*	625
Posey County—		
Superior Oil Co., New Harmony 8	1200	2208
Sun, Streh 1	90	1892
Vigo County—		
Vanderbeck & Whitaker, Troutman 1	90	2212

* Failures; † Junked; ¶ Million cu. ft. gas.

Kentucky Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Breckenridge County—		
J. Cooper, Mooreman 7	5	344
Daviess County—		
Stewart et al, Westerfield 2	50	1765
Farmer & Chenault, Ragsdale 2	*	1403
General Dr. Co., Dode Taylor 3	*	1381
Hancock County—		
W. J. Flesher, C. Young 1	*	1464
Lee County—		
Thomas Wittmer, C. Cox 1	*	
McLean County—		
Cumberland Pet. Co., Butterfield 7	270	1114
Martin County—		
Rockcastle Gas Co., Vinson 1	¶.15	1300
Ohio County—		
Joiner & Levine, Davidson 8	15	703
J. C. Miller, J. F. Smith 5	10	824
J. W. Tuttle et al, Berry 3	10	115
C. L. Trusler, Schroader 1	*	956
J. Toom, Smith 2	*	120
Evans et al, Wimsatt 1	*	130
Powell County—		
Evans Oil & Gas Co., Townsend 5	15	800
Monroe Faulkine, Rogers 1	10	800
Todd County—		
Peard et al, Hadden 1	¶.15	1675

* Failures; † Junked; ¶ Million cu. ft. gas.

W. A. Carithers 2, 330 feet from the north line and 400 feet from the east line, SE SE 26-1s-10w, was a location, and D. & H. Drilling Company's W. W. Sipp 1, SE NW SE 24-3s-9w, was drilling at 600 feet.

A Posey County wildcat shut down for several weeks, Ken-Ill-Ind Oil Company's Inez Montgomery 1, SE NE NE 9-4s-12w, resumed drilling. It had drilled through a show of gas in the Pennsylvanian.

New Lake Centralia refinery ready for operation

A new outlet for Lake Centralia field crude materialized last week as Lake Refinery Company's new 2000-barrel unit was prepared for immediate operation. The refinery, located 2 miles southwest of Salem on the Missouri-Illinois railroad tracks, will be supervised by Fred Williams, formerly of Dallas, Texas. The company is headed by John G. Lane, of Tyler, Texas, and L. R. Eddy of Gladewater, Texas.

Pennsylvania Completions

Company, Well and Locations	Init. Prod. Bbls.	Depth
Bradford District—		
John H. & Shirley Sloan, Bing 413	2	....
Walker Bros. et al, Bing 382-3	1	....
R. E. Hungiville No. 2, Bing 299-300	2	....
Penn Valley Crude Oil Corp., Redfield	3	....
E. G. & F. W. Stephen, Kurtzhalts	6	....
Simon & France, Gaeng & Fenton	½	....
Niagara Oil Corp.	1	....
Bradford Transit Co., 9 wells	9	....
Bradford: Water Intake Wells—		
Victory Oil Co., Wright	..	....
Forest Oil Corp., 2 wells	..	....
Niagara Oil Corp., 2 wells	..	....
Butler-Armstrong District—		
J. C. Treesdale, J. C. Martin	*	....
Goldie Oil Co., Herman Neyman	*	....
Middle District—		
Orrin D. McCray, W. P. McCray	1	....
J. R. Sweitzer et al, J. R. Sweitzer	3	....
A. V. Clinger, Payden	3	....
New York-Pennslyvania: Gas Field—		
Evjen-Harris, A. R. Mitchell	*	....
Sylvania Corp., R. C. Holmes	*	....

* Failures; † Junked; ¶ Million cu. ft. gas.

New York Completions

Company, Well and Locations	Init. Prod. Bbls.	Depth
Allegany County—		
Vosburg Oil Co., Green Farm, Bolivar	4	1245
Forest Oil Co., Ackerman farm, Bolivar	100	1378
Moore & Repp, Hatch farm, Bolivar	6	1280
Forest Oil Co., Ackerman farm, Bolivar	20	1390
Forest Oil Co., Ackerman farm, Bolivar	18	1410
Forest Oil Co., Ackerman farm, Bolivar	20	1382
Allegany: Water Intake Wells—		
Sloan & Zook, McDivitt farm, Bolivar	..	1072
Sloan & Zook, McDivitt farm, Bolivar	..	1086
Karl-Weller Oil Corp., J. M. Karl farm, Genesee	..	1360
Liberty Share Corp., Lee farm, Bolivar	..	1396
R. B. Moore, et al, Daggett farm, Bolivar	..	1382
Walter McEnroe et al, Hoover farm, Bolivar	..	1420
Walter McEnroe et al, Hoover farm, Bolivar	..	1411
First Nat'l Bank, Olean, Birtell farm, Wirt	..	1372

* Failures; † Junked; ¶ Million cu. ft. gas.

Tennessee Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Clay County—		
Simpson et al, Stephens 1, 4 miles n Celina	¶	540
Tennessee Oil & Gas Arms 1, 1 mile n Celina	120	529

* Failures; † Junked; ¶ Million cu. ft. gas.

West Texas Fields

Key wildcat to West Texas deep search logs Yeso.

Wasson field assured half mile north extension.

Midland, Texas.—Rated as a key test in determining whether deep prospecting is warranted in West Texas territory lying north of production in the Permian basin. Humble Oil & Refining Company's Westheimer-Daube 1, northwestern Cochran County projected 9500-foot wildcat, was drilling in lime at 7170 feet. It is in basal Permian, having entered the Yeso, or Clear Fork member of the Permian at 4680 feet, with an elevation of 3862 feet. The next objective is the Pennsylvanian, then possibly the Ordovician series. No shows have been recorded in drilling beyond established producing zones for the upper basin.

Possibility of encountering granite without penetrating potential oil zones in the sub-Permian is based primarily upon the experience of Shell Oil Company's Milnesand prospect, Roosevelt County, New Mexico, situated 26 miles west by south. The latter quit in granite at 7957 feet last April. Geological information derived from the Cochran County test henceforth will undoubtedly have considerable bearing on lease buying predicted upon deep prospects.

Second for Lower Permian

Second oil producer from the lower Permian on the west edge of North Cowden, Ector County, was attained when Stanolind Oil & Gas Company's Blakeney 1-A, C NE SW T&P Section 28, yielded 106 barrels of 36-gravity oil in 15½ hours on the latest swabbing test after using 1000 gallons and 2000 gallons of acid in Dolomite at 5120-60 feet. It is 3 miles southeast of the discovery completion for this new horizon, classed as lowed mid-Permian, and raises the prospects of worthwhile production being found in the above and nearby fields by deepening wells that exhaust their regular Permian output. Blakeney 1-A is slated to cement a string of 5-inch casing to eliminate most of the open hole carried below the 7-inch at 3895 feet. A larger acid injection under greater pressure will follow.

Consideration was given this new oil zone for the county by Humble Oil & Refining Company in farming out 3 tracts that require offsets. In Goldsmith field, the company assigned leases on N½ N½ NE Section 19, and S½ SE of SW Section 20, Block 44, T-1-N, to Trinity Drilling Company for the immediate drilling of 3 wells. The former is to receive 1/16 over-riding royalty until the total aggregates $15,000, and reserves mineral rights below 4350 feet. Humble turned its Henderson 160-acre lease, embracing NE T&P Section 30, Block 42, T-2-S, south end of Foster

West Central Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Brown County—		
Murray et al, Cross 2	10	1100
Selvidge et al, Fee 8-A	*	1204
Callahan County—		
Little et al, Ledbetter 1	40	1726
Coleman County—		
Schaffner et al, Rude 1	4	855
Mills County (Wildcat)—		
Lane et al, J. W. Spink 1	*	2430
Shackelford County—		
Lee & Key, Lee 7	10	1121
S. B. Roberts Co. & Owens-Snebold, Olson 1	*	3215
Shackelford County (Wildcat)—		
Roeser-Pendleton & Continental, Cook 2-A, sec 146	*	1710

* Failures; † Junked; ¶ Million cu. ft. gas.

West Texas Completions

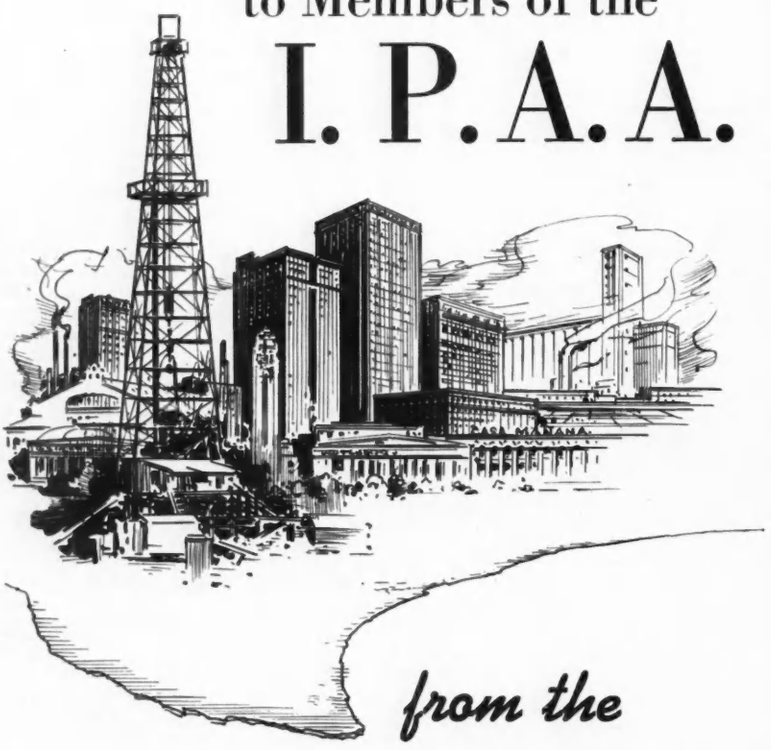
Company, Well and Location	Init. Prod. Bbls.	Depth
Crane County (Church-Fields)—		
Magnolia, University-Hardwick 21	*	3546
Ector County (Foster)—		
Arkansas F. O. Co., Johnson 2-C	611	4218
Stanolind, E. F. Cowden 23-A	974	4164
E. F. Cowden 30-A, sec 22	617	4190
E. F. Cowden 21-B, sec 14	1072	4170
J. E. Witcher 20, sec 19	710	4210
York-Harper & Sloan-Zook Co., Foster 6-B	639	4287
Ector County (Goldsmith)—		
Gulf, Goldsmith 222	1848	4199
Goldsmith 223	2184	4212
Ector County (North Cowden)—		
Aloco Oil Co., Holt-Texaco 3	1135	4300
Standard of Texas, Cochran 2	745	4202
Stanolind, Roberts 17	580	4415
Gaines County (Seminole)—		
Osage Drl. Co. et al, Tippett-Ohio 1-A	1023	5289
Gaines County (Wasson)—		
M. B. K. Drl. Co. et al, Wasson 2-B	232	5012
Hockley County (Slaughter)—		
Western States Gasoline Corp., Frazier 1	1360	5004
Jones County—		
Fain-McGaha Oil Corp., Ferguson 3	268	1896
Jim Jennings et al, F. A. Pope 1	*	2080
G. J. Scholl et al, C. C. Leuderman 1	*	1931
Pecos County (Payton)—		
J. G. Kugle-Sunset Oil Co., Jackson 3-102	35	2079
Pecos County (Shearer)—		
Sahara Oil Corp., Shearer-Atlantic 7	210	1506
Pecos County (Pecos Valley)—		
Black-Adams & Bennett, Iowa Realty-Redman 2	173	1623
Pecos County (Taylor-Link)—		
D. Breeding et al, University-Humble 3-J	447	1688
Pecos County (White-Baker)—		
Cardinal Oil Co., White-Baker 4-B-45	100	1702
Reagan County (Big Lake)—		
Big Lake Oil Co., University 17-C	1147	8269
Upton County (McCamey)—		
T. P. Coal & Oil Co., Lane 39-A	302	2097
Ward County—		
Eastland Oil Co., M. Weiss 4-A	348	2379
Gulf, Hutchings 129	2410	2755
Winkler County (Emperor)—		
Texon O&L Co. et al, Cowden-Conoco 6-27	522	2967
Winkler County (Hendrick)—		
Stanolind & Westbrook-Thompson, Hendrick 4-F-T-89	24	3006
Winkler County (Keystone)—		
Weiner et al, Jenkins-Conoco 1	†	2375
Yoakum County (Bennett)—		
Argo Oil Corp., J. G. Comer 1-A	1574	5217
Yoakum County (Wasson)—		
Aloco Oil Co., Jordan-Saltmount 2	552	5200
Continental, Stevens 2-A	817	5130
Humble, H. C. Wooten 17	474	5145
H. O. Wooten 18	1007	5134
Magnolia, Kendrick 6	1799	5150
Murchison et al, Elliott-Standard 10-B	968	5099
Elliott-Standard 11-B	814	5090
Oil Dev. Co. (Texas), Willard-fee 1-801	628	5212
Willard-fee 2-803	650	5214
Willard-fee 6-803	1320	5230
Shell, Baumgart 8-C	1165	5219
T. P. Coal & Oil Co., Cecil-Bloomer 3-A	944	5100

* Failures; † Junked; ¶ Million cu. ft. gas.

Greetings . . .

to Members of the

I. P. A. A.



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field, with a small pumper, to J. L. Rush et al for $10,000 cash and $65,000 payable from ⅛ of the production, with rights below 4500 feet reserved. Continental Oil Company recently contracted to assign lease on its 256-acre tract, situated to the south in Section 31, to J. D. Tompkins et al, retaining 1/16 over-riding royalty and minerals below the 5000-foot level.

Operations in the Seminole field, Gaines County, were increased to 5 the past week by starting Magnolia Petroleum Company and Atlantic Refining Company's Havenmeyer-Jenny 2, C SE SE Section 219, west offset to the most easterly producer. The latter has rigged up to drill Riley 1-B, C NE NW Section 229, offsetting the most recent completion. Osage Drilling Company's Johnson-Ohio 1, mile outpost to the north, was drilling at 4800 feet. Seminole has 16 oil producers which require 12 offsets in addition to the above activity. Entry of a major pipe line into the field to replace tank truck shipments is expected to be announced shortly.

A half mile north extension for the northwest sector of the Wasson field was assured when Aloco Oil Company's Morris-Texaco 1, C SW SW Section 732, registered oil saturation at 5075 feet, and was drilling at 5110 feet. Performance of this outpost may be a deciding factor as to whether Luther Turman et al carry out proposal to drill about 3 miles to the northeast, in an area containing dry holes. Don Danvers et al have acquired two lease farmouts near the north and southwest edge of the Wasson field. Ohio Oil Company assigned lease on S½ SW Section 735, retaining 3/16 over-riding royalty, with an immediate test required by a south offset. This lease is a mile south by west of the only dry hole near the north flank of the producing district. Danvers et al also obtained lease on the west 80-acre tract of PSL Section 37, Block AX, from Bill Little et al for ¼ over-riding royalty.

Spread of the Yoakum County portion of Wasson district to the east was given encouragement when Magnolia Petroleum Company's Kendrick 6, SW SE NE Section 868, most easterly test, earned a potential rating of 1799 barrels after using 4000 gallons of acid at 4960-5150 feet.

Magnolia Petroleum Company's Sealy 2-43, SW NE NE Section 43, Block F, 1¾ miles south by east of the Magnolia-Sealy pool, Ward County, failed to make a commercial well from upper pay, topped at 2702 feet with an elevation of 2670 feet. Increase in gas was noted at 2823-27 feet while drilling with an oil load, and at 2830 feet the test was in lime.

Texas Panhandle Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Carson County—		
Skelly, Schafer 99	352	3201
Gray County—		
Evans et al, Benton 5	451	3293
Hagy-Harrington & Marsh, Vaniman 1	¶19.3	2736
Lone Star Gas Co., Shaw 1	*	2795
Nabob O&G Co., Morse 3-B	499	2785
Stanolind, Merten 10	288	3286
Hutchinson County—		
Continental, Smith 3	¶6.3	3228
Pennotex Oil Corp., Thompson 2	475	2993
J. R. Phillips Employees, Inc., Thompson 2	234	3058
Moore County—		
Texoma Natural Gas Co., Thompson 8-TH	¶22.2	3346

* Failures; † Junked; ¶ Million cu. ft. gas.

North Texas Fields

Second Consolidated field completion 220 feet high

Wichita Falls, Texas.—Consolidated pool, southeastern Wilbarger County, recorded its second oil producer from the top section of the Strawn Series, or 220 feet higher than the north offset. Consolidated Oil Company and D. E. Hepler's Ancell 1-N, NEC H&TC Section 35, Block 6, flowed 170 barrels of oil in 8 hours after using 1000 gallons of acid in sandy lime at 3750-72 feet. The partnership's discovery logged favorable showings in this upper Strawn, but cemented pipe at 3985 feet to complete in lower pay at 4065 feet, having topped the lime marker at 3763 feet. The area is 3 miles northwest of the K-M-A deep area and has been pronounced a separate structure.

Stimulation of development of the K-M-A and Hull-Silk field will take place immediately, following the granting of a 25 percent increase in the base allowable by the Texas Railroad Commission on the combined plea of operators and crude purchasers. Prior to the issuance of the special order the K-M-A area's 1105 deep wells were credited with a base allowable of 33,768 barrels daily, and the Hull-Silk area 1642 barrels for 46 wells. Both are subject to the 11 non-producing days in

North Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Archer County (Hull-Silk)—		
Barnes & R. P. Traugh, Carson 1..	1200	4312
Burns et al, K. Ahrens 4, sec 127..	750	4325
Christie et al, Little 1-B.....	776	4345
Archer County (K-M-A)—		
Bridwell Oil Co., Thom 1.....	135	3864
Archer County —		
Bert Ligon-Southern Pet. Explo. Co., Moss 8-B	75	1289
Archer County (Wildcats)—		
Frasier et al, Coleman 1-A.....	*	1704
W. B. Hamilton Pet. Co., Graham 4	156	1135
Clay County—		
Gant et al, Spring 1.....	*	3990
Nixon Bros. & Dutton, Tanner 1, blk 4	*	1506
Clay County (Wildcat)—		
Costley et al, W. A. Henderson 1..	*	1403
Cooke County (Walnut Bend)—		
Cox & Hamon, Neu-Texaco 1-A....	920	4989
Cooke County—		
Russell et al, Lynn-TCU 1.....	173	1128
Trumter Oil Co., Andress 19.....	28	785
Whitfield-Pearson & Grimes, Voth 3-B	250	1752
Cooke County (Wildcat)—		
Big Indian, Gehrig 3	*	1922
Denton County (Wildcat)—		
Hughes & Gannon, Saunders 1....	*	1502
Grayson County (Wildcat)—		
Chandler et al, Miller 1.....	*	2345
Haskell County (Wildcat)—		
Kendrick et al, Hendrick 1.....	*	3259
Wichita County (K-M-A)—		
E. C. Oil Co., Mangold 1-A.....	496	3826
Hamilton et al, Martin 6-A, sec 36	728	3892
Hanlon & Buchanan, Fassett-Tuttle 1-F	*	4145
Royal Pet. Co., James 2, sec 16....|	1280	4002
Wichita County—		
Hanlon & Buchanuan, Collins 1-A	264	1718
Holt et al, J. W. Bailey 1.....	*	590
Owens Oil Co., Hines 4, sec 11....	*	900
Perkins & Cullum, Burnett 23-A, sec 1	14	673
Wichita County (Wildcat)—		
J. P. Coleman et al, Williams 1..	*	1502
Wilbarger County (Wildcat)—		
Consolidated Oil Co.-D. E. Hepler 1, Waggoner Est. 1-DD	*	4235
Young County—		
March et al, Hunt-McClatchey 2, sec 79	*	1163
Meyer et al, Cullers 5, sec 25.....	*	630

* Failures; † Junked; ¶ Million cu. ft. gas.

To
FORT WORTH
Amusement Center of the Southwest

TO THE MEMBERS AND FRIENDS OF INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA: Fort Worth extends to you a hearty western welcome. Come to your convention (October 18, 19, 20) prepared to enjoy yourselves. Large, cool assembly rooms in as fine hotels as the South affords—beautiful theaters, glittering night clubs, fishing and boating on three of the South's finest lakes, golf (there are ten courses to choose from) and many other attractions. Plan to stay over until the 21st and see Texas Christian University's great football team in action against Texas A. & M. For further information concerning Fort Worth and the convention address

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October, thereby materially reducing the daily average output. Pipe line connections are no longer a problem for operators, and at K-M-A considerable rivalry prevails among buyers.

Western Clay County has been assigned two more semi-wildcats, and the wildcat being drilled by Shell Oil Company on the Scaling Ranch, Block 87, J. H. Belcher Survey, was drilling at 5245 feet in sand and shale. Nominal show at 5025-28 feet in sand was passed up. Frabor-Hodges Corporation et al made location for Scaling 1, SWc Block 8, G. P. Meade Survey, 2 miles south of its 4120-foot discovery pumper on the Kinder Ranch. The group recently obtained 2 320-acre tracts from Scaling Ranch for $150 per acre oil payment plus an obligation to drill each.

F. W. Merrick et al's Robertson 1, SWc E½ Block 10, J. H. Belcher Survey, is to seek Strawn production. It is 1½ miles north of Burns pool.

Archer County has 2 active wildcats that will seek deep lime production in the south half of the County. W. B. Hamilton et al's Graham 5 was drilling at 3350 feet. Permins & Collum's Fall County 183 was drilling at 3300 feet.

Amerada Petroleum Corporation's Rice 1, 8 miles southeast of Quanah, Hardeman County, logged top of Bend lime at 7270 feet and was drilling at 8020 feet to explore the Ordovician. In the same county, Kimbell et al's Walling 1 was drilling at 3970 feet on a 5500-foot contract.

Texas permits drop to 116

A sharp decline in Texas drilling was noted last week with 116 permits approved by the railroad commission, 57 less than were allowed the week before.

Four permits were approved in the East Texas field, including three in Gregg and one in Rusk County. Ten locations were reported from the remaining portion of the East Central Texas area.

The Gulf Coast district led the state with 40 permits, while Southwest Texas held second place with 27 locations. The commission approved the drilling of 9 new wells in North Texas, but no locations were permitted in the Panhandle.

From West Texas 14 permits were reported, while 12 locations were approved in West Central Texas.

Arkansas permits

El Dorado, Ark.—Only one drilling permit was authorized last week by the Arkansas Oil and Gas Commission, this being in Columbia County. Permit to drill was issued for Shell Oil Company's W. F. Merritt 2, C NW SW 15-17-20.

Pecos County line

San Angelo, Texas. — Cardinal Oil Company, owner of 6 shallow oil wells in the White-Baker pool, Pecos County, is building a 10-mile 2-inch crude line to Shell Pipe Line Corporation's Yates field pump station. The former has been trucking its oil to the Taylor-Link field on consignment to the above carrier.

East Texas Fields

Higher allowable reduces East Texas pressure

The effect of the higher allowable in the East Texas oil field was apparent last week when figures released by the Texas Railroad Commission showed that pressures in the field have dropped 17.47 pounds from September 8 to October 8. The new order permitting production at the rate of 690,000 barrels daily became effective on September 14 and has remained in force since.

Production for the period averaged 385,400 barrels daily. The field was closed down on all Saturdays and Sundays between September 8 and October 8, and in addition was closed on September 12 and 13 and October 2. This left production for one day, September 11, at the old rate of 522,000 barrels per day.

Beginning on September 14, the rate of production was approximately 690,000 barrels, and the remaining 16 days of the 17 production days were at the higher rate. This meant a total allowable for the 30-day period of 11,562,000 barrels, or 385,400 barrels daily on the average.

From this it would appear that the accelerated rate of production which took place during the latter days of the period ending October 8, must have had a material effect on pressure decline. Past experience has shown that when the rate of production was increased in the field, pressure declined rapidly for a few days and then levelled off; that is, declined at a lower rate if the decline was not arrested entirely.

What influence this will have on future allowable adjustments in the East Texas field is yet to be determined, but on the basis of the pressure changes since 1933, a much more rapid rate of decline may be anticipated if the present top allowable is retained.

The observed pressure decline during the period October 8 to November 8 will probably indicate definitely the trend the field will take. If it is closed on all Saturdays and Sundays, it will be permitted to produce on 21 of the 31 days of this period. At the rate of 690,000 barrels per day, this would mean a total production of 14,490,000 barrels, or a daily average production of 467,419 barrels for the 31 days.

Since production for the month September 8 to October 8 averaged 385,400 barrels, it is apparent that during the succeeding month there will be an 18 percent increase in the oil production from the field, an increase amounting to an average of 82,019 barrels per day.

In this connection, it should be recalled, however, that the total fluid production from the field is not increased 18 percent. At the old rate of production, 522,000 barrels per day, there was in addition about 150,000 barrels of water produced. There is no reason to expect that the water withdrawals will increase in direct proportion to the oil production, so that the total fluid withdrawals from the field will not be increased 18 percent.

East Texas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Joiner Area—		
Hunt Oil Co., Young 26 (125.95-ac)	2000	3720
Kilgore Area—		
Carter et al, Clary 11	120	3540
Gen'l Am. Oil Co., Williams 22-B (112-ac)	480	3746
Roosth & Genecov, Laird 3	320	3560
Angelina County (Wildcat)—		
Patterson et al, Harrison 1	*	925
Houston County (Navarro Crossing)—		
Humble, Pouncey 1	127	5890
Navarro County (Flag Lake)—		
Topaz Oil Co., Trammell-Humble 2	325	3004
Titus County (Talco)—		
Magnolia, Chapman 5	214	4340

* Failures; † Junked; ¶ Million cu. ft. gas.

Outpost to Cass County Rodessa making wet gas

Shreveport.—Approximately 1½ miles northwest of production on the Cass County, Texas, side of Rodessa, Scott Hamomnds and associates' Florence and Price 1, Charles Ames Survey, was making an estimated 1 to 4 million cubic feet of wet gas daily from 5954 feet in the Gloyd horizon, topped at 5863 feet. Elevation is 243 feet. Operators will allow the well to flow gas for several days to see if volume will not increase. Showings were logged from 5875-84 feet and from 5888-90 feet.

Louisiana permits

Shreveport.—Thirty-four drilling permits were issued last week by the Louisiana Conservation Commission of which 10 were in North Louisiana parishes, as follows: Caddo, 3; DeSoto, 1; Franklin, 1; LaSalle, 1; Union, 3; and Webster, 1. Those in South Louisiana were in the following parishes: Avoyelles, 3; Cameron, 5; East Baton Rouge, 2; Evangeline, 2; Iberia, 3; Jefferson, 1; Jefferson Davis, 2; Lafayette, 1; Lafourche, 2; Plaquemines, 1; and St. Mary, 2.

Rincon's crude producing area extended 3½ miles

Mission.—Rincon field of Starr County was having its crude oil production extended 18,500 feet to the southwest by W. R. Davis & Company's first of 20 wells to be drilled in the development of these properties. Casing was being run in T. B. Slick Estate 2-B, C Section 528, after the well had cored a sand section 4170-96 feet. On a drill-stem test at 4170-86 feet, the well developed 630 feet of pipe line oil and showed 175 pounds pressure in 20 minutes.

The above test is within 1½ miles of a condensate producer which opened the field. Since that time, crude production has been established on the northeast flank of the structure. Three other wells are being drilled as outposts to the crude production in an effort to expand that zone.

Davis & Company recently acquired control of the large block and is to erect a recycling plant in the field to handle condensate from wells producing from a sand at approximately the same level as the crude zone.

Randon Oil Company's R. E. Margo 1, Lot 9, subdivision of the Margo Lands, and several miles west of Sun field in Starr County, has been abandoned at 5705 feet. The test topped a sand in the Jackson at 5501 feet, tried to blow out, but was controlled and carried to its contract.

Southwest Texas Fields

Extension and new sand double size of Ben Bolt.

Continue testing Odem's potential discovery well.

Corpus Christi.—Ben Bolt now becomes another large reserve in Jim Wells County development as a new sand and an important extension virtually double the area already proved. Geological information provided by these operations indicates the pool will be further expanded by subsequent development.

H. H. Howell's G. R. Muzzy 1, approximately ½ mile northwest of production and in the southwest corner of Lot 4 of the Whitman Subdivision, flowed between 15 and 20 barrels of oil per hour through 3/16-inch choke under pressures of 650 pounds on tubing and 700 pounds on casing. It is considered to be the best producer thus far completed in the field.

The above well cored gas sand at 5178-88 feet and oil sand to 5221 feet and went to 5251 feet, where casing was landed. Perforations were made 5198-5220 feet with 32 shots and the well completed. It logged the sand, correlated as the discovery pay, 32 feet higher than any oil producer in the field and is figured as being 70 feet above the water level.

Second Oil Sand

H. J. Mosser opened a second oil sand for the pool in E. Perales 1, south? east corner Block 2, north end of the area. It cored the sand at 5413-33 feet and casing was set 5445 feet. When perforated at 5414-18 feet, the well flowed 70 barrels of pipe line oil per day through 3/32-inch choke under 200 pounds on the tubing and 725 pounds on the casing.

Seaboard Oil Corporation of Delaware was making a series of tests up the hole in M. C. Smith 1, potential field discovery on the Odem prospect, San Patricio County. It first showed for a gas well through perforations at 7048-53 feet, then flowed salt water at 7058-60 feet. On test at 6995-7000 feet, it indicated a distillate producer. Salt water was found through perforations at 5915-25 feet, 5815-20 feet, 5380-88 feet. New holes were made above this level, but no details are available.

Perforate Near Agua Dulce

Nueces County had one wildcat in the testing stage. Premont Petroleum Company's F. Langham 1, Section 25, Benton Subdivision, 1½ miles south of Agua Dulce townsite, was carried to 7145 feet and casing was landed at 5681 feet. It showed salt water through perforations in sands at 5615-30 feet and 5359-66 feet. The zone logged at 5025-90 feet was perforated and test was being made. The well had attempted to blow out from this level.

Pat Rutherford and Royal Oil Corporation's E. E. Swift 1, NW SW Section 25, 3 miles northeast of La Rosa in Refugio County, showed salt water in the zones producing in that field. It has been abandoned at 6515 feet.

Heaving shale made its appearance in another prospect as Coronado Corporation's K. L. Welder 1, Hidalgo Grant, 2½ miles south of Seadrift, was running casing to around 7600 feet. It topped the shale about 6150 feet. The well is closed to information, so details are lacking. The last string of pipe run was 13⅜-inch, set at 1769 feet, hence it is possible that 8¼-inch casing is being set. The hole is projected to 10,000 feet.

A new operation has been commenced in the Texana area of Jackson County, where a distillate well has been completed in the Frio. The new well is a mile southeast of the discovery and will be drilled by the same operators that drilled the first producer. It is Moore & Ahern and Cron & Gracey's Clement 1, in Block 18.

Recycling plant assures drilling condensate field

Corpus Christi, Texas.—Another important condensate field development through the construction of a large recycling plant is assured following the purchase of a producing block in Nueces County by a syndicate headed by Clyde Alexander, Robert T. Wilson and John Sheerin. Marshall Field financial interests also are involved in the transaction.

John L. Sullivan, president of Texon Royalty Company and Sultex Oil Corporation, sold some 8500 acres of his holdings bordering Stratton field on the north and extending into the Agua Dulce area of Nueces County. The deal included all of the properties with the exception of the company's crater on the southwest corner of the Clara Driscoll property, which blew out in November, 1936, at 6832 feet and has been running wild and burning ever since.

Leases held by the Texon interests in this immediate area are the J. B. Butts, George F. Dryden et al, Charles H. Jones, C. E. Lane, O. A. Gruene, Mable Eliff, Clara Driscoll, C. H. Horne, Helen Austin Philbert, and R. H. Coleman tracts. The majority of these are involved in the deal.

Large Capacity

The recycling plant to be built in the field will process a minimum of 50,000,000 cubic feet of gas per day, possibly twice that much. The unit will be a typical high pressure proposition, stripping the condensate from the wet gas, then returning it to the ground through a compressor system under a pressure of at least 2700 pounds to the square inch.

Corpus Christi Corporation, headed by the purchasers of the above properties, plus W. A. Warren of Tulsa, has commenced construction of a major addition to its recycling plant in Stratton. A new 600-horsepower compressor unit is being installed to bring the plant to 3000 horsepower and to increase its capacity from 54,000,000 to 64,000,000 cubic feet per day.

In connection with the two deals, a drilling contract involving nearly $500,000 has been awarded to John F. Camp Drilling Company of San Antonio. The company will drill 3 wells immediately on the Stratton block and will sink at least 10 on the newly acquired leases. Two rigs are to be run, it is understood. The drilling will include wells ranging from 6400 feet to 6900 feet, or a total of at least 90,000 feet of hole.

Corpus Christi Corporation has completed preliminary negotiations for a

Southwest Texas Completions

CORPUS CHRISTI DISTRICT

Company, Well and Location	Init. Prod. Bbls.	Depth
Aransas County—		
Baytex, Tripp 1 (McCampbell)	475	7235
Culton, Barry 2-B (McCampbell)	600	7423
Manahan, Carlock 5 (McCampbell)	400	7199
Hidalgo County—		
Dean, Guerra C-2 (Samfordyce)	250	2914
Jim Wells County—		
Graham & Mosser, Mosser 2-B (Reynolds)	500	5250
Howell, Muzzy 1 (WC-Ben Bolt)	800	5251
Humble, Clark 1 (East Alice)	*	5358
Mosser, Perales 2 (Ben Bolt)	500	5470
Rutherford & Royal, Garcia 1 (WC), La Trinidad gr	*	6015
Texas Gulf, Miller 6-A (Reynolds)	700	5178
Live Oak County—		
Norsworthy, Knight 1 (WC), J. R. Johnson sur	*	4013
Nueces County—		
Fain, Bock 2-B (Minnie Bock)	650	2826
Stanolind, Spessard 28 (Luby)	350	5176
Sun, McCann 10 (Luby)	500	5065
Texas Conservative, Bock 2 (Minnie Bock)	500	3822
Union, Pyle 1-B (Agua Dulce)	¶10 & 100	5016
Simmons 6 (North Agua Dulce)	*	6023
Refugio County—		
Hewit & Dougherty, Rooke 8-B (La Rosa)	650	6500
Quintana, Heard 34 (Tomoconnor)	2700	5925
Rutherford & Royal, Swift 1 (WC), sec 25	*	6515
San Patricio County—		
Houston, Fee 8 (East White Point)	600	5674
Killam, Taft 3 (East White Point)	650	5608
Shell, Kirk 5 (East White Point)	500	5665
Sinclair Prairie, State 3 (East White Point)	500	5637
Victoria County—		
Barnsdall, Keeran 5 (Keeran)	500	5610
Gulf, Traylor B-15 (Heyser)	600	5573

SAN ANTONIO DISTRICT

Bexar County—		
Smith, Schuwirth 1 (WC), de la Garza sur	*	1165
Hays County—		
Mann & Thomas, Reeder 1 (WC), R. Vaughn sur	*	3380
Medina County—		
Medina, Schmidt 10 (Ina)	40	982
Travis County—		
Richardson, Chamberlain 1 (WC), sur 37	*	738
Williamson County—		
Taylor, Riethmayer 1 (WC), Cartwright sur	*	1132

LAREDO DISTRICT

Duval County—		
Cox & Hamon, Hoffman 12 (Hoffman)	*	lcn.
Hoffman 13 (Hoffman)	60	2901
Government Wells, Lundell 34 (Lundell)	78	1546
Harvey & Henderson, Welder 1 (WC), Eagle Hill area	*	2698
Hiawatha, Parr 28 (North Sweden)	¶10	5995
Hawkins, Howell, Garcia 1 (Chiltipin)	¶5 & 50	4860
Humble, Welder 4-D (Loma Novia)	*	2830
Magnolia, DCRC 1 (101) (WC), sur 101	*	2735
DCRC 39 (201) (Piedre Lumbre)	300	2145
Miller, Miller 16 (Longhorn)	650	4906
Sun, Brueggemann 19 (Fitzsimmons)	400	4274
Jim Hogg County—		
Harrison, Trevino 4-A (Colorado)	350	3070
Henshaw, Trevino 1 (Colorado)	250	3050
Magnolia, Merchants State 44 (WC) sur 268	*	2513
Starr County—		
Ald, Garza 1 (WC), sh 33, porc 71	*	lcn.
Zimmermann, Wood 1 (lse 2), WC in S. Ricaby area	*	2792
Webb County—		
Killam, Fee 3 (WC), sur 1859	*	2784
Lipton, Adami 1 (Adami)	60	978
Schimmel, Valdez B-1 (Volpe)	*	2510
Zapata County—		
Dulup, Trevino C-3 (Escobas)	15	1224

* Failures; † Junked; ¶ Million cu. ft. gas.

location on or near the Corpus Christi ship channel for the construction of a reforming plant to handle at least 10,000 barrels of condensate daily, plus a large terminal for storing and loading of the high gravity fluid for export and coastwise shipment.

Soon the company will commence looping its 4-inch pipe line between Stratton and Corpus Christi. Pump units will more than double present capacity. A gathering system will be extended through Stratton, South Agua Dulce and Agua Dulce fields to carry this condensate from the plants owned and operated by these interests.

Several months ago, the Sheerin, Alexander, and Wilson interests made a deal with Union Producing Company for operating rights on approximately 16,000 acres of leases in Agua Dulce district and are building a 135,000,000-cubic foot recycling plant. They also are drilling 36 wells. Associated with the Chicago Corporation in this deal, these men are investing approximately $3,500,000 in the Agua Dulce area on Union Producing Company properties.

Shale may prove hazard to Wilcox exploration

San Antonio.—Fishing jobs have delayed completion of 2 highly important Wilcox wildcats along the South Texas Gulf Coast just as they neared their expected producing levels, a situation which may indicate that shale conditions above the Wilcox formation will prove a hazard to exploration. While these shales are not of the heaving type, their conditions on structure are of such a nature that drill pipe may be stuck by the breaking down of the walls.

In the Garwood area of Colorado County, Davis & Company had 48 stands of drill stem lodged at 8834 feet. The well, McLane 1-A, was in the Mount Selman zone at this level, having topped the Ceratobulimina Eximia at 6503 feet and the Operculinella at 7153 feet. Lower determinations were not available.

Marshall Purvis et al's Afflerbach 2, about 4 miles southeast of Yorktown and in DeWitt County, drilled to 6825 feet and set plug at 6115 feet, where the hole was sidetracked. It is drilling ahead below 6250 feet. The well had pipe stuck slightly below 6400 feet, shot it off, and drilled to the total depth, where another twist off occurred. It encountered the Weeches at 5430 feet, Queen City at 5610 feet, Reklaw at 6020 feet, Bigford at 6148 feet, Cyclammina zone, or Mount Selman, at 6438 feet. A break was noted at the bottom of the hole, possibly going into another zone.

Wilcox was topped at 6339 feet, followed by six feet of sandy material with oil showing, in Midway Oil & Royalty Company et al's Schumacher 1, Lavaca County's Wilcox operation. The test is located in the S. H. Jack Survey, 3 miles north of Sublime. At last reports the well was coring below 6430 feet.

Among the other Sparta-Wilcox operations drilling along the same trend, Wellington Oil Company et al's Booth 1 at Fordtran was progressing below 6000 feet and Tide Water Associated Oil Company's Bruni test in the heart of the Bruni field of Webb County was in the Mount Selman section below 7200 feet.

Texas Gulf Coast

Humble test at Anchor may cause quick development.

Testing shallow sand on Fairbanks northeast flank.

Houston.—Several new rigs will be moved into the recently discovered Anchor field in Brazoria County if Humble Oil & Refining Company's Metler 1, the field's latest start, develops production as a number of leases are slated for expiration January 1.

Thus far the field has only one producer, Glenn H. McCarthy's Carr 1, discovery well which was completed in Frio sand at 10,460-66 feet. On a potential test last week it rated 267 barrels of 49-gravity oil through ¼-inch choke. Tubing pressure was 2100 pounds; the casing was sealed; gas/oil ratio was estimated at 23,000 to 1.

Sun Oil Company is expected to move in a rig soon at Anchor; McCarthy has made another location, and Humble has staked several tentative ones.

The latter company is preparing to drill an important geophysical prospect in Brazoria County, having made location for Smith 1, Bonney prospect, 466 feet north and west of the southeast corner of Lot 32. Kanawha Texas Company Subdivision of the W. D. C. Hall Survey, Abstract 59. Humble worked this area with reflection seismograph at different times from 1931 to 1939. Several other companies have done geophysical work in this area. Bonney lies in a trend toward Angleton in which are located the new Anchor field and Chenango prospect. Leases have sold as high as $75 per acre base along the trend.

On the northeast side of Fairbanks, Harris County, Union Producing Company is attempting to open a new producing horizon for the field. Whitehead et al 10 was perforated with 72 shots from 6505 to 6520 feet and was being washed at the close of the week. The regular producing horizon for the field is below 6800 feet.

Shows in Extension Test

The Texas Company is attempting to extend production at Port Neches, Orange County, southeast with Kuhn 16. The hole, drilled to 6402 feet, has been plugged back and sidetracked. It is now down to 5601 feet in shale. Cores in the first hole showed oil odors in sandy shale from 5909 to 5930 feet, 5948 to 5966 feet and from 5966 to 5976 feet. Oil sands were cored from 6048 to 6056 feet and from 6065 to 6066 feet.

Rowan Drilling Company has completed a well ¼ mile northeast of production at Lovall Lake, Jefferson County: Bordages 1, Wm. Carr Survey, made 181 barrels daily through a ⅛-inch choke from sands at 7798 feet.

On the northwest side of League City field, Galveston County, Phillips Petroleum Company has cemented the drill stem in Wimhurst 1 at 10,860 to 10,900 feet. The well had attempted to blow out and drill stem was stuck.

On the flank of Esperson, Liberty

Pearsall lease purchase calls for 20 new wells

San Antonio.—A 20-well drilling program, involving an expenditure of around $800,000 is to result from purchase of lease on 505 acres in the Pearsall field of Frio County by Texas Atlas Petroleum Corporation. Contract for the wells has been awarded to Kepley Production Company of Corpus Christi, with the first operation scheduled to be commenced soon.

The deal was for a portion of the Leona River Ranch in the southwestern portion of the field and in the vicinity of several producers which showed high potentials from Austin chalk at 5250 to 5600 feet. The transaction was made between James K. Kepley and W. D. Fleming of the Kepley Production Company, representing the purchaser, and E. N. Cory and McWilliams Brothers, owners of the Leona River Ranch. Consideration included some cash, deferred oil payments and drilling obligations.

The field was discovered in late December, 1934, by Amerada Petroleum Corporation et al with a 3900-foot Navarro sand producer. Since then production has been developed at 5200-5600 feet in the Austin chalk, 5800-5900 feet in the Buda-Georgetown limestone, and 6200 feet in Edwards limestone. Two wells carried to below 10,000 feet found oil and gas showings in the Glenrose-Trinity Series. There are 19 wells in the field at this time with the daily output about 695 barrels. Approximately 1,000,000 barrels of crude have been recovered to date.

Texas Gulf Coast Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Clear Lake—		
Stanolind, Coulter 1	24	5850
Esperson—		
General Crude, Fee B-6	500	7265
Friendswood—		
Humble, Goodwin B-4	400	6044
Hastings—		
N. W. Hunter, Boyles 1	*	6553
Joe's Lake—		
Republic, Fee 24	430	7764
Louise—		
Ken-Tex Oil Co., Weaver 1	*	5161
Lovall Lake—		
Humble, Broussard Trust 10	184	7790
Rowan Dr. Co., Bordages Estate 1	182	7810
Stanolind, Sreinhagen 1	169	7794
Old Ocean—		
Harrison & Abercrombie, Augsburger 2	272	10,357
Segno—		
Humble, Kirby B-X-16	328	8182
Spindletop—		
Abbott Prod. Co., Sun Oil Co. 1	14	800
Thompson—		
Humble, Davis 15	463	5440
Withers—		
Texas Co., Pierce Estate C-63	35	5545
Brazoria County—		
Glenn H. McCarthy, Carr 1, Anchor area, J. De J. Valderas sur.	267	10,466

* Failures; † Junked; ¶ Million cu. ft. gas.

County, General Crude Oil Company completed another good producer when Fee B-6 flowed 500 barrels daily from 7265 feet. The company's Fee 8-B, another flank test, has cored oil sands at 7650 to 7760 feet and from 7765 to 7790 feet. The hole was down to 7822 feet in shale at the close of the week.

Hastings Outpost Abandoned

Southwest of production at Hastings field, Brazoria County, N. W. Hunter has abandoned Boyles 1, H. T. & B. No. 37, at 6553 feet after running 250 feet low on structure and coring salt water sands in the Frio formation at 6470 to 6553 feet.

Between the Citrus Grove and Wadsworth prospects in Matagorda County, Gulf Stream, Incorporated, has announced location for a wildcat on the Zyprian tract 1360 feet from the north line and 1700 feet from the east line of the lease in the L. Lassassier Survey. Deep wells on the Citrus Grove prospect have encountered heaving shale.

J. R. Turnbull again will try to establish commercial production in the Cedar Bayou area, Chambers County. Last week he announced location for Kirby 1, 600 feet west and 925 feet north of the northeast corner of the Short Survey. Turnbull's Sheppard 1, R. A. Porter Survey, in the same area with Kirby 1, was rigging up a pumping unit. Depth is 6465 feet.

Three miles south of El Campo, Wharton County, S. G. Harrison has made location for Kountz 1, a wildcat in an area where a number of dry holes have been drilled. It is 660 feet from the north line and 330 feet from the west line of the northeast quarter of Section 51, E. T. R. R. Survey.

Preparing to complete Sejita discovery well

Laredo.—Standard Oil Company of Texas was making preparations to complete Jack Casey, discovery well of Sejita pool in southeastern Duval County. Work delayed due to a depth discrepancy will be resumed immediately. The well, located in Block 26, Section 4, Copita Farms, is bottomed at 6476 feet. It flowed gas under heavy pressure from perforations 6590-6610 feet and made salt water and gas at 6080-6180 feet. Closed in pressure being 1300 pounds on the last test. The well found sandy sections at 5335-45 feet 5373-5406 feet, 6075-6190 feet, and 6588-6111 feet.

Contracts to drill deep wildcat near Fillmore

St. Joseph, Missouri.—E. F. Neely, Shreveport, Louisiana, operator, announced last week that he has closed a contract with Derby Oil Company of Wichita, Kansas, to drill a deep test to the St. Petersburg sand on a wildcat block 20 miles northwest of St. Joseph, Missouri, near Fillmore, Andrews County. Rotary rig will be used. Others owning acreage in and around this block include Carter Oil Company, Ohio Oil Company, Phillips Petroleum Company, and E. O. Olds of Camden, Arkansas, Neely said.

South Louisiana

New oil sand in test south of Darrowdome production.

Eola test logs thick section of Cockfield formation.

Lake Charles.—Pan American Production Company's Mills 1, LaPlace prospect, St. John The Baptiste Parish, last week on a drill-stem test recovered gas and distillate, and was drilling below 9000 feet at the end of the week. The drill-stem test was at 8880 feet, with a 1470-foot water cushion, and recovered 10 gallons of distillate after the testing tool had slipped. Flowing pressure was 3900 pounds.

About 2500 feet south of production at Darrow dome, Ascension Parish, Humble Oil & Refining Company has logged a new oil sand in Gumble 16, the deepest hole drilled in the field. It was bottomed at 8445 feet last week with 7-inch casing set at 8374 feet. A production test will be made the coming week. New oil sands were logged from 8255 to 8260 feet, sand and sandy shale with shows of oil from 8260 to 8270 feet, and lime and shale with show of gas from 8345 to 8374 feet. Gumble 9 drilled to 7980 feet in heaving shale and abandoned in April, 1937. The deepest producing horizon at Darrow is in Oligocene around 7071 feet.

The thickest body of Cockfield sand to be cored at Eola field, Avoyelles Parish, was in Amerada Petroleum Corporation's Marchive 6, logged from 6431 to 6465 feet.

Eola is producing from Wilcox at 8300 to 8500 feet and no well yet has been completed in the Cockfield. Other wells have cored the formation and logged from 5 to about 20 feet of it.

Amerada Petroleum Corporation's Glaze 2 was completed the previous week in the Wilcox but it had around 30 feet of Cockfield. Marchive 6 was down to 8194 feet last week in broken Wilcox and casing probably will be set the coming week for production test.

Wilcox production for Bancroft, Beauregard Parish, in the lower horizons looked disappointing last week when Republic Production Company tested Lutcher Moore 9 several times in that formation and recovered salt water. The most promising horizon, 10,290 to 10,302 feet, was tested at the end of the week and water was recovered after casing was perforated with 24 shots. The hole has been plugged back and a test will be made around 8400 feet, a new level.

On the southeast side of Ville Platte it appears the Continental Oil Company will have to complete Coriel 2 in Wilcox. Tests have been made in the Haas and Tate sands and both had salt water. The last test at 8977 to 8982 feet showed water and the well has been shut down for orders. This hole was drilled to 10,360 feet in shale and logged oil sands in the Wilcox, but was plugged back.

William Helis has made another location on the flank of Section 28 salt dome after abandoning Levert-St. John 1, at 5639 feet with no shows of oil. The new location is for Levert-St. John 2, 400 feet south of the dry hole, in Section 33-9s-7e.

Amerada Petroleum Corporation is completing its first well at Grand Lake, Cameron Parish. State Mallard Bay 1 was perforated with 140 shots from 8389 to 8415 feet and it came in flowing 330 barrels of 32.2-gravity oil daily through various size chokes. Tubing pressure was 1300 pounds.

Humble Oil & Refiing Company's second well in the Perkins area, Calcasieu Parish, was abandoned last week at 9450 feet. Edgewood Land & Logging Company 2 failed to pick up the 7038-to-7040-foot Oligocene gas-producing sand found in the discovery well.

The Texas Company has abandoned its second wildcat on the Bastian Bay prospect, Plaquemines Parish. State 1 was abandoned at 10,278 feet in shale, no shows of oil were reported. The operators first well on the prospect was abandoned at 12,257 feet in June, 1939. It had a show of oil in a lime and shale formation around 8821 feet.

The Texas Company has evidently found a new producing horizon for Golden Meadows, Lafourche Parish, in Theriot 1. The well showed a sand with indications of oil from 6600 to 6622 feet after an electrical log was run. It is bottomed at 10,100 feet with 7-inch casing set. Golden Meadows is producing above and below the 6600-foot sand.

South Louisiana Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Baton Rouge—		
Wm. Helis, Duplantier A-6	292	6481
Materiste 3	284	6475
Williams 2	277	6479
Sugar Field Oil Co., Nichols 1	398	6518
Chalkley—		
Humble, Sweet Lake Land & Oil Co. 4	*	8542
Caillou Island—		
Texas Co., State 59	*	5419
Charenton—		
Fifteen Oil Co., St. Bayou Crue 2	295	5900
Knisley Oil Co., LeBlanc 8	*	2980
Golden Meadows—		
Texas Co., L. L. E. Golden Meadows 3	460	7940
Brown & Woods, Petrie 1	144	2726
Golden Meadows Oil Co., Collins 1	220	5453
Jennings—		
Peter Clobah, Gulf Fee 1	*	1741
Shell, Conover Community 7	423	7696
Lafitte—		
Texas Co., Rigoletts 11	1189	10,060
North Crowley—		
Humble, Stakes 2	113	8602
Quarantine Bay—		
Gulf, State QQ-13	528	8549
Perkins —		
Humble, Edgewood 2	*	9450
South Roanoke—		
Continental, Calcasieu National Bank 2	*	10,090
Valentine—		
Pan American, Harange 21	550	5427
Ville Platte—		
Continental, O. Deville 5	293	9066
J. E. Vidrine 3	190	8971
West Hackberry—		
Stanolind, Binson-Vincent 1	*	2985
St. Martin Parish—		
Wm. Helis, Levert-St. John 1, Section 28	*	5639
Plaquemines Parish—		
Gulf State PP 8, West Bay area	*	10,074
Texas Co., State 1, Bastian Bay prospect	*	10,278

* Failures; † Junked; ¶ Million cu. ft. gas.

North Louisiana

Cotton Valley's Bodcaw zone has 23 producers

Shreveport, La.—Two "D" sand oil wells were completed last week in the Lower Marine at Cotton Valley, Webster Parish, bringing to 23 the number of oil wells producing from the "D" and "E" (Bodcaw) horizons in that district.

On the south flank of the field, Stanolind Oil & Gas Company's Pardee Company 3, C SW SE Section 35-21n-10w, was completed from the "D" sand as the twenty-second oil well from the Lower Marine. It gauged 697 barrels of oil in 24 hours through ¼-inch choke, with tubing pressure 1450 pounds and casing, 1800 pounds. Casing was perforated at 8446-70 feet with 120 shots. The "D" sand was logged from 8446-70 feet, the Bodcaw from 8542 to 8583 feet, and the Pardee "sand" from 8590-8603 feet, the latter being tight. Elevation is 182 feet. Bodcaw sand showed gas and distillate saturation.

The other Lower Marine well, on the southeast edge of the field, was flowing ungauged from the "D" sand. This is Hunt Oil Company's Glass 1, located 100 feet south of C SE NW 30-21n-9w, which drilled to 9043 feet before being plugged back. With an elevation of 197 feet this test topped Lower Marine at 8032 feet, logged the "D" sand from 8469-83 feet and the Bodcaw sand from 8562-8602 feet, oil showing in the last 8 feet. This test topped the "F" or Davis sand at 8850 feet and showed 1 foot of oil saturation at the bottom. Casing was perforated from 8470-78 feet.

Continental Oil Company is ready to spud its second test on a salt dome discovered in Franklin Parish in the first hole drilled on this geophysical prospect. The new test is Federal Land Bank 1, located 330 feet south and east NWc 36-13n-8e.

A semi-wildcat well in Swolle district, Sabine Parish, completed at 2575 feet by Hunter Company is Sabine Lumber Company B-1, NW NW Section 17-7n-13w. It is flowing 30 barrels of oil daily.

Union Producing Company's deep geophysical wildcat test in Morehouse Parish on the north flank of the shallow Monroe gas field appears to be checking high. This test, Tensas Delta A-1, NE SW SE 8-22n-4e, with elevation of 71 feet, topped Lower Marine at 4425 feet, and topped the Smackover lime at 7230 feet showing porous lime in streaks from 7230 to 7276 feet. It is the first test that far east that has reported oolitic lime. The test later was drilling at 7519 feet.

Jack Lent reported a showing of oil in chalk at 1420-70 feet in Walker 1, NE NE Section 9-10n-10w, a wildcat in Natchitoches Parish, and may set casing for a test. Depth is 1470 feet. Lent had a similar showing but not so pronounced at about the same depth in a test he drilled several months ago in Section 17-10n-10w.

North Louisiana Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Caddo Parish (Rodessa)—		
East Texas Ref. Co., Atkins 1, 8-23n-15w	276	6140
De Soto Parish (Wildcat)—		
Sutton et al, Frost 1, 35-11n-15w	*	400
La Salle Parish (Urania)—		
Snow-Black Pet. Co., Pendarvis 1, 26-10n-1e	*	1350
Sabine Parish (Converse)—		
Oklahoma-Texas Trust, Frost 3, 22-9n-13w	135	3041
Sabine Parish (Zwolle)—		
The Hunter Co., Sabine B-1, 17-7n-13w	30	2575
Webster Parish (Cotton Valley)—		
Stanolind, Pardee Co. 3, 35-21n-10w	697	8606

* Failures; † Junked; ¶ Million cu. ft. gas.

Arkansas Fields

Tenth Smackover lime well is completed in Village

El Dorado, Ark.—The tenth oil well was completed last week in Village, Columbia County, and the fifteenth in Buckner, both Smackover lime oil producing districts in Arkansas. Magnolia, with 68 producing oil wells, failed to add a completion.

At Village the McAlester Fuel Oil Company's E. D. Harris 1, C SW NW 14-17-19, was completed at 7407 feet flowing 111 barrels oil in 17 hours. With elevation of 294 feet, this test topped the Buckner zone at 7224 feet and Smackover lime at 7339 feet, with top of porosity at 7377 feet.

The fifteenth well at Buckner, first of the Smackover lime fields in south Arkansas, discovered in November, 1937, was Standard Oil Company of Louisiana's Allen Foster 1, C NW SW 7-16-22, on the LaFayette County side, completed at 7260 feet flowing 98 barrels of oil per hour through 1½-inch choke after using 3000 gallons of acid. Porosity was topped at 7249 feet. Tubing pressure was 510 pounds, and casing pressure, 200 pounds.

Fohs Oil Company and Delta Drilling Company's C. T. Grace 1, Section 13-17-14, deep wildcat in Union County, drilled ahead at 4144 feet after showing salt water in a drill stem test at 3922-42 feet.

The second test was spudded during the week in the new Dorcheat (Experiment) district, Columbia County, this being Lion Oil Refining Company's Warnock 1, NW NW 15-18-22, east offset to the discovery well. The discovery well, Atlantic Refining Company's Pine Woods Lumber Company 1, NE NE 16-18-22, completed at 9002 feet from the Smackover lime, was reported to be showing 5 percent salt water. A leaking casing was blamed. An analysis of the oil from this well, which will be run by a new three-inch line to Mag-

Arkansas Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Columbia County (Village)—		
McAlester Fuel Oil Co., Harris 1, 14-17-19	175	7407
LaFayette County (Buckner)—		
Standard, Foster 1, 7-16-22	1152	7620
Lonoke County (Wildcat)—		
Cabot Dr. Co., Deason 1, 18-4n-9w	*	1453
Union County (Smackover)—		
Crestrock Oil Co., Riley 1, 9-16-15	10	2415
Union County (Urbana)—		
Delta Dr. Co., Webb 1, 6-18-13	*	2672
Pike County (Wildcat)—		
Wallace et al, Tillyou 2, 26-8s-24w	*	601

* Failures; † Junked; ¶ Million cu. ft. gas.

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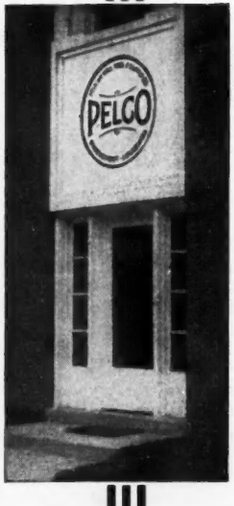

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Lake Charles—Houma—Converse
New Iberia—Monroe
Cotton Valley—Greggton
Magnolia—Houston

nolia field, showed the following: Gravity, 43.9 A. P. I.; paraffin, 3.95 percent; sulphur, 0.40 percent; gasoline content, 39.0 percent; kerosene, 15.75 percent; heavy gas, 5.25 percent; bottoms, 39.0 percent; loss, 1.0 percent. The oil is coming from 8860-74 feet, where casing was perforated.

Amerada Petroleum Corporation has a geophysical unit working in Township 15 south, Range 13 west, Calhoun County. Standard Oil Company of Louisiana has a unit working in township 16 south, Range 26 west, Miller County.

Woodley and asociates of Shreveport have assembled a 7500-acre block of wildcat acreage around Section 18-10s-7w, Lincoln County, for a 4000-foot test to spud by March 1. Arkansas Fuel Oil Company expects to farm out its block around Section 33-14-18, a geophysical prospect in Ouachita County. In the same county, The Texas Company is adding acreage around Sections 10 and 11-12s-19w.

Mississippi

Two Tinsley Dome tests are nearing Selma chalk

Jackson, Miss.—Two tests in the Tinsley Dome district of Yazoo County were nearing the Selma chalk, producing horizon of the discovery oil well of this section, last week. Both are operations of the Union Producing Company, which completed the discovery well.

A half mile north of the discovery well, completed at 4560 feet from 20 feet of Selma chalk formation, the above company's Jennie Stevens 1, C NW NW 13-10n-3w, which topped black shale at approximately 3640 feet, was coring at 4440 feet. South of the discovery well, the company's Perry Estate 1, C NW NW 24-13n-3w, which topped the black shale at 3635 feet, was coring at 4487 feet. During the last week Jones and O'Brien's Jennie Stevens 1, SW SW NE 13-10n-3w, spudded. Union Producing Company has completed a three-inch line from the discovery well to Tinsley Switch, Yazoo County.

One new location was announced in Yazoo County, Yazoo Refinery, Incorporated's Brooks 1, NE SE 17-10n-2w. A great deal of leasing still continues in Yazoo County.

There has been a considerable influx of oil men to Jackson. Among those recently assigned to that place as a result of developments in Mississippi are: Floyd Parker, geologist for Texas-Pacific Coal & Oil Company, Charles E. Davis of Tulsa, scout for Pure Oil Company; J. J. Perkins, Amerada Petroleum Corporation, Tulsa; Dick Fixton and A. L. Bawden, Sinclair Prairie Oil Company; W. J. Budd of Hunt Oil Company, Dallas; and W. Harlan Taylor and Chester Sappington, geophysicists.

Benedum & Trees Oil Company has sent a magnetometer unit into Washington County, north Mississippi. Ryan & Anderson have a geophysical unit working for them in old Amory gas field, Monroe County, northeast Mississippi.

New Mexico Fields

Wildcat finds shallowest production in Lea County.

North end of Vacuum field gets eastern extension.

Hobbs, N. M.—Western Lea County has a wildcat producer in process of completion that establishes a new shallow depth for oil in the county. Contracts have been made for drilling 2 additional tests to the west and south, although the probable producing area likely will be small due to the presence of nearby dry holes. Frank M. Farley and associates' State-Texaco 1-A, C NE SW 16-20s-32e, opened the new pool in developing 2500 feet of 25.8-gravity oil in 6 hours from sandy-lime at 2627-29 feet, with an elevation of 3512 feet. Brief bailing tests with open hole below 938 feet failed to lower the fluid level. An oil string was cemented on top of the pay to complete the well early this week.

Argo Oil Corporation has authorized the drilling of State-Texaso 1, C NW SW 16-20s-32e, being 1320 feet due west of the prospect. Westlea Oil Company, representing the joint operations of Farley, Ted Weiner and Peck & Croft, Incorporated, contracted to drill George Cleveland-Texaco 1, C N½ NE NW 21-20s-32e, about ½ mile south of the discovery.

Farley et al's wildcat project was drilled on 200 acres of leases farmed out by The Texas Company, while other acreage owners contributed towards the cost of the test. Location was made on subsurface data supplied by Western Drilling & Engineering Company's State 1, NE NE 16-20s-32e, which was abandoned September, 1931, at 4013 feet; Argo Oil Corporation's Burner-Texaco 2, C SE SE 8-20s-32e, abandoned July, 1935, in sulphur water at 2798-2803 feet; and The Texas Company's Moore 1, C NW SE 21-20s-32e, a failure at 3019 feet, with first sulphur water in lime at 2880-85 feet.

To Test Eddy Strike

A production test for the northern Eddy County shallow oil strike reported last week was scheduled to get underway late last week after cementing the oil string. This prospect involves B. H. Nolen et al's Iles 1-a, SEc 17-16s-29e, from sand at 1803-19 feet. Bailing tests prior to landing 7-inch at 1620 feet indicated an output of 35 barrels of pipe line oil daily.

Lea County recorded 11 new tests the past week for 8 areas, including E. G. Woods et al's Simon-Maljamar 1, C NW NE 29-17s-32e, situated near the southwest edge of the Maljamar field. The latter is on acreage subleased last June by Maljamar Oil & Gas Corporation.

The Lynn-Cooper lime area accounted for a prolific well when Continental Oil Company et al's Lynn 3-A-28, C W½ SE SE 28-23s-36e, flowed 216 barrels of 36-gravity oil per hour on 2-hour test through casing, with drill pipe in the hole, from pay at 3609-61 feet. On completion gauge the well flowed 96 barrels hourly through ¾-inch tubing choke, with gas volume rated at 627,000 feet daily. Gulf Oil Corporation's G. E. Cooper 2, C NW SW 11-24s-36e, is a new operation on the east flank of Cooper.

New Operations

New operations for Eunice include Shell Oil Company's State-Endura 3-A, SW SW NE 12-21s-35e, west edge. The sandy-lime belt in the east portion of the county accounted for 4 operations. J. M. Rush et al's G. H. Mattix 1, C SE NW 10-24s-37e, is starting up on a 40-acre site, and if productive will call for a series of progressive offsets.

The production width of the north end of the Vacuum field was broadened to the east by the completion of Magnolia Petroleum Company's State-Bridges 45, C NW NW 13-17s-34e, flowing 51 barrels natural in 4 hours through tubing choke from lime at 4673 feet. Rig will be skidded ¼ mile east. The Texas Company has become the largest operating unit in the field with 7 rotary rigs in service, all offsetting producers.

New Mexico Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Eddy County—		
Carper et al, Miller 1, c nw ne 5-18s-29e	86	2664
Carson & Kelly, Berry 1, sw se ne 22-17s-27e	*	525
Cone et al, Langford 1, c nw sw 9-18s-29e	50	2725
Fair et al, Brainard 1, sw nw ne 10-18s-29e	960	2622
State 1-B, se nw sw 16-17s-29e	*	3318
Grayburg Oil Co., State 1, ne se se 36-17s-29e	480	2772
Me-Tex Supply Co. et al, Yates 2, c ne se 5-18s-29e	300	2632
Nash et al, Jackson 10-A, c n½ ne ne 24-17s-30e	1680	3327
Plains Prod. Co., Swearingen 1, c nw ne 14-18s-31e	20	4330
Rhodes Drl. Co., Swearingen 2, c ne ne 14-18s-31e	15	3635
Sallee-Yates et al, Ballard 1-B, c e½ nw nw 1-18s-29e	720	2680
Lea County (Hardy)—		
Magnolia, Carson 7, c ne nw 33-21s-37e	269	3780
Lea County (Langlie)—		
Richmond Drl. Co., State-Texaco 4-A, c ne sw 2-25s-37e	292	3424
Lea County (Lynn)—		
Continental et al, Lynn 3-A-28, c w½ se se 28-23s-36e	2304	3661
Lea County (Maljamar)—		
Love et al, Pearsall 3, c nw nw 33-17s-32e	25	4283
Lea County (Mattix)—		
Humble, Williams 7, c ne ne 34-24s-37e	312	2530
Lea County (Penrose)—		
Magnolia, Brunson-Argo 4, c ne nw 10-22s-37e	264	3733
Lea County (Vacuum)—		
Drl. & Explo. Co., State-Shell 3-M, sec 29-17s-35e	416	4590
State-Shell 2-O, se sw ne 34-17s-34e	105	4710
San Juan County (Rattlesnake)—		
Continental & Santa Fe Corp., Munoz-Rattlesnake 96, ne ne sw 2-29n-19w	20	832
Torrance County—		
Chief O&G Co., Pace 2, 12-6n-7e (pb to 1950 ft)	¶50,000	2215
Valencia County (Wildcat)—		
Old Spanish Grants & C. M. Joiner, Poltenghe 1, c ne ne 23-7n-1e	†	5620

* Failures; † Junked; ¶ Million cu. ft. gas.

Rocky Mountain Fields

Strong increase recorded in Lance Creek drilling. Sublette County wildcat sets depth record at 9675 feet.

Casper, Wyo.—A strong increase in activity for Lance Creek, eastern Wyoming, was seen this week as operators released 5 new well locations and prepared to place several other wells on production. Continental Oil Company continues to hold first place as the most active single operating concern in the field, the firm having spotted 3 of the new wells to bring its total number of locations in the field to 7, of which 1 is testing production and preparing to complete while others are drilling. Ohio Oil Company is completing a well and accounted for a new location. The remaining start was spotted by A. B. Cobb.

Drilled on the northeastern end of Lance Creek structure, where recent developments have shown an extension to the proved Sundance producing horizon pool, Continental's Rodeo 7, Lease 4, CSW SW NE 35-36n-65w, has run tubing to bottom at 4285 feet in the Jurassic beds and is preparing for a pumping test of the formation. Good saturation was cored but the well would not make a flowing producer.

A. B. Cobb is preparing to reshoot the Joss producing sands, lying below the Leo bench of the Minnelusa horizon, in Novick 4, SE SW 6-35n-65w, on the western edge of the field, in an attempt to increase the flow which tested 6 barrels per hour from 5380 feet in the sand after placing the first shot.

A wildcat drilled by The California Company on the Pinedale structure in Sublette County, western Wyoming, has established a new deep hole record for the state. Unit 1, CSW NE 7-12n-99w, is making hole below 9675 feet, surpassing the former deepest hole in Wyoming, the Amerada Petroleum Corporation's Morton 1, SW SW 13-13n-68w, drilled in 1937 on the Borie high structure in Laramie County, southeastern Wyoming, and abandoned at 9348 feet. No well log has been released to date on this test by the operators.

Mountain States Completions

MONTANA

Company, Well and Location	Init. Prod. Bbls.	Depth
Toole County (Kevin-Sunburst)—		
Big West Oil Co., Dahlquist 13, cnl nw ne 21-35n-3w	160	1840
G. & A. Oil Co., Goeddertz 14, ne se sw 23-35n-3w	30	1698
Lee J. Yealey, Shaw 13, ne sw se 35-36n-2w	20	1764
(Midway Area)		
LaMac Oil Co., 1, swc se se 3-34n-4w	*	2079
WYOMING		
Carbon County (Wertz)—		
Sinclair-Wyoming Oil Co., Wertz 12-B, swc se ne	3607	6086
Niobrara County (Lance Creek)—		
Ohio Oil Co., Cash 3 OPC-1, csw nw sw 4-35n-65w	462	5488
Sublette County (LaBarge)—		
North LaBarge Oil Co., Government 1, ne se 28-27n-113w	63	992
Weston County (Osage)—		
Krokar et al's 2, cnl se nw 31-47n-63w	*	395
Charles Stough's 1, csl nw sw 33-47n-63w	*	455
Gerald Bock, 3, cnl nw nw 31-47n-63w	*	290

* Failures; † Junked; ¶ Million cu. ft. gas.

A North Cut Bank well which showed for production from 4 sands; the Moulton, Sunburst, Upper Cut Bank and Lower Cut Bank, held the center of attraction for the Montana fields during the past week. The well is Glacier Production Company's Hall 3, NW NE 35-36n-6w, drilling in the Darling pool of the North Cut Bank field. Operators logged a flow of 4,000,000 cubic feet of gas in the Moulton horizon at 2937-95 feet. Drilling into the Sunburst sand at 2925-35 feet, the well encountered good saturation and made about 1 bailer of oil per hour from the horizon. Hole drilled ahead into the upper Cut Bank horizon at 2989-3025 feet, where oil rose 1200 feet in the hole. The company ran casing to 2982 feet, top of the Cut Bank, shutting off the Sunburst and Moulton sands, and the hole was drilled to 3051 feet. with the Lower Cut Bank sand at 3025-3048 feet showing 1600 feet of oil and considerable gas. The well was plugged back 3 feet to shut off water and is preparing to test. Official estimates place the daily production of the well at around 150 barrels settled.

Ask 40-acre spacing for new Pottawatomie pool

Tulsa—George L. Pace has requested 40-acre well spacing for the Viola lime discovery at Hale 1, C SW NE 31-10n-5e, Pottawatomie County, Oklahoma. The source of supply appears to embrace 880 acres located in S½ section 30, SW Section 29, NW NW Section 32, W½ SE and W½ NE SE and E½ SW and E½ NW SW of Section 31, all in township 10n-5e. Total depth of the discovery well was 4485 feet and pay found at 4383 to 4416 feet. Recovery per acre is estimated from 3000 to 8000 barrels. Porosity and permeability both being low, it was necessary to acidize in order to bring it to commercial production. The discovery rated a potential of 840 barrels daily on the completion record. Phillips Petroleum Company and other lessees have agreed to the 40-acre spacing.

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Michigan Fields

Many locations planned as Walker is extended north

Mt. Pleasant, Mich.—Walker field, Kent County, again was widened on the north side this week and the bulk of the 45 new permits called for locations on the north side of the field.

Daily Crude Oil Company's Herman 1, NW NW NE Section 11-8n-14w, Polkton Township, Ottawa County, about 15 miles northwest of the Walker field, but only 6 miles from a small pumper, logged an oil-gas show in the top of Traverse lime and shut down to case and cement the 5-inch string at 1901 feet. In the Berea at 1200-1235 feet the wildcat showed 220,000 feet of dry gas.

The main Walker field was widened by Fisher & McCall, Incorporated's Newhouse 1, ¼ mile north of previously drilled production, which initialed 600 barrels natural at 1868 feet.

New interest in Van Buren County, area of heaviest drilling in the fall and winter of 1938 near Bloomingdale,

was created this week when R. T. & E. Corporation's Tyson 1, Section 18-4s-13w, Porter Township, logged an oil show 1146 feet through an open hole. The hole carried 900 feet of water. Operators planned to set 5-inch at 1140 and test.

First Trenton Oil

More drilling activity was promised in Southeastern Michigan with two new Trenton lime wells making commercial producers in the 2000-foot zone. A. V. Oil Company's Mueller 1, NE SW NW, Section 30-6s-6e, Monroe County, flowed 202 barrels on test in 24 hours after two nitro shots at 2108 feet. This is the only Trenton lime production in Michigan.

Sun Oil Company continued to drill Wilcox 1, Section 5-3n-9w, Barry County wildcat, with Sylvania sand the current objective, after upper lime beds failed to show commercially. A string of 5-inch casing was to be run first of week at 2406 feet to case off upper water beds. Wilcox 1 is Sun's first test in a 25,000-acre wildcat block, located on a seismograph high. Traverse, the only known producing horizon so far developed in Southwestern Michigan, was logged high but carried water and only a gas show. Traverse was topped to 1848 feet, Dundee at 2119 feet and Monroe at 2167 feet.

Michigan Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Allegan County—		
Bell-Marks, Inc., Brenner 1, nw sw se 23-3n-12w	*	1795
Little Four Oil Co., Cooley 1, nw ne sw 27-1n-12w	*	1481
Borough, Inc., Fein 2, ne sw nw 2-4n-13w	350	1692
Salem Gas Co., Smith 4, sw sw sw 14-4n-13w	200	1598
Miller Bros., Thorpe 1, nw se sw 1-2n-14w	*	1600
Barry County—		
Strange Oil Co., Basore 1, nw nw nw 17-2n-7w	*	2035
Kent County—		
Wolverine Nat. Gas Co., Kniff 1, nw sw se 29-7n-12w	1000	1893
Louis Rose, Lincare 2, sw se se 29-7n-12w	500	1893
Fisher-McCall, Newhouse 1, sw se nw 29-7n-12w	600	1868
Ide & Glavins, Taalman 2, nw sw sw 29-7n-12w	550	1870
Smith Pet. Co., Taalman 1, sw nw sw 29-7n-12w	600	1873
Handley 3, sw ne sw 30-7n-12w	700	1896
Gordon Oil Co., Brenner 1, nw nw se 30-7n-12w	380	1900
Kruizenga 1, nw ne se 30-7n-12w	400	1914
Rex Oil Co., City 3, sw nw sw 3-6n-12w	100	1773
Monroe County—		
A. V. Oil Co., Mueller 1, ne sw nw 30-6s-6e	200	2108
Bridger Basin, Dusseau 1, sw se nw 19-6s-6e	60	2145
Oceana County—		
W. K. Swan, Skidmore 1, c se ne 15-16n-16w	*	1990
Ottawa County—		
Daily Crude Oil Co., Herman 1, nw nw ne 11-8n-14w	*	1964
St. Clair County—		
Lee Brown, Beals 1, ne nw nw 32-7n-16e	*	1105
Clare County—		
Taggart Bros., Perkins 17, c se 15-18n-6w	*	1504
Pure Oil Co., State A6, c s nw nw 33-19n-6w	1200	3876
Gratiot County—		
Chapman Oil Co., Smith 1, c s ne se 20-10n-4w	*	3256
Van Buren County—		
H. B. Cannon, Drake 1, ne nw sw 28-2s-16w	*	1011
Blood et al, Westcott 3, sw sw ne 28-2s-16w	*	1027
Adams Drilling Co., Dubsky 1, ne sw se 29-1s-15w	*	1145
Fisher & McCall, Witter 1, ne ne nw 13-3s-15w	*	1134

* Failures; † Junked; ¶ Million cu. ft. gas.

California Fields

East Coalinga outpost test is failure

Los Angeles. — In East Coalinga Eocene E. A. Parkford's No. 45-24, an outpost in Section 24-20-25 failed to find sufficient showings to make a producer after exploring to 8240 feet. Gray sand was encountered at 8205 feet and some oil stained sand logged from 8213 to 8218 feet which was wet from 8218 feet to bottom.

Completion a short time ago of George F. Getty's Janssen 1, deep well in the Wasco field, Kern County, has forced Superior Oil Company to swing into action by staking a tentative location for Meyer 1 near the center of Section 7-27-24 to offset the Getty producer. Incidently, Standard Oil Company of California is completing rig site for Mushrush 3 at Wasco which also will offset Getty's well. The Getty well found top of the Vedder zone high structurally, indicating that the apex of the structure lies northwest of Continental Oil Company's A-2, discovery well. The performance of Janssen 1 is good news to those planning deep wells in this valley field as its daily yield has been steady.

Superior Oil Company also is preparing to launch a semi-wildcat test west in Rio Bravo field, Kern County. Location has been picked for Smith 1 in Section 34-28-25, and it will test an 80-acre parcel.

California Completions

Company, Well and Location	Init. Prod. Bbls.	Depth
Los Angeles County (Dominguez)		
Union, Callendar 72	1150	7400
Los Angeles County (Montebeloo-West)		
British-American, Ryder Well 1	670	7585
McKeon & Associates, Travis 1	300	7625
Los Angeles County (Wilmington)—		
General Petroleum, SP (LB) 13	584	2950
Royalty Service, Fleming 1	160	3634
Royalty Service, Santa Fe B-2	425	5713
Fresno County (Coalinga-Northeast Area)—		
Standard No. 73-19B	3690	8270
Kern County (Mt. Poso)—		
Chevalier Oil, SP 4	140	1506
Fresno County (East Coalinga Eocene Pool)—		
Robert S. Lytle, No. 42-7F	1875	7622
Standard, No. 86-13C	3950	7454
Superior, Cagle 3	3620	7085
Kern County (Kern River)—		
D. B. K. Co. No. 10	5	490
W. T. Dick, Dick 4	15	653
Fresno County (Kettleman No. Dome)—		
K. N. D. A., NI. 47-22Q	2100	7890
Santa Barbara County (Santa Maria, old)—		
Union, Squires 21	20	4058
Ventura County (Rincon)—		
General Petroleum, Hobson A-1	234	4055
Ventura County (Ventura Avenue)—		
Shell, Edison 34	824	8730
Los Angeles County (Montebello West)—		
Ridge Oil, Sea Cliff 1	*	8039
Los Angeles County (Long Beach)—		
Signal Oil, Signal-Goodyear 3	*	4196
Fresno County (Coalinga-Deep Test)—		
E. A. Parkford & Associates, Coalinga 45-24C	*	8243
Kings County (Tulare Lake Area)—		
Graphic Oil, Taylor 1	*	4044
San Joaquin County (Stockton Area)—		
Utilities Petroleum, No. 1	*	5721

* Failures; † Junked; ¶ Million cu. ft. gas.

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WILDCAT REPORT
New Starts and Completions

ARKANSAS
FIRST REPORTS

Clark County—Coker Oil Co.'s Cave 1, ne nw ne 8-10s-21w, mim.

Columbia County—Standard's R. S. Warnock 1, c nw nw 36-16s-20w, mim.

COMPLETIONS

Lonoke County—Cabot Drilling Co.'s Deason 1, sec 18-4n-9w, show gas and sw, used 45 quarts glycerine 1390-1440 ft, abnd 1453 ft.

Pike County—Bruce Wallace et al's Tilyou 2, se se 26-8s-24w, abnd 601 ft.

CALIFORNIA
FIRST REPORTS

Los Angeles County—C. W. Partridge's Whittier Crude 14, lcn 150 ft n 100 ft w of center nw¼ 22-2-11, Whittier area.

Kern County—Shell's Pleito A-37-25, grade, lcn 4366 ft s 1876 ft e nwc 25-11-21, Grapevine-Wheeler Ridge area.

Kern County—Gample & Oliver's Abbott 1, dr; lcn 500 ft s 300 ft w of nec 7-27-19, Shale Hills area.

Fresno County—Chuka Oil's No. 2A, lcn 307 ft n 30 ft w sec nw¼ ne¼ 10-23-16, Reef Ridge area.

Ventura County—Argo & Rynning's McGregor & Agnew 1, lcn Sec 7-4-21, Ojai area.

ILLINOIS
FIRST REPORTS

Bond County—Fowler, Hunter & Cruse's Stoneking 1, Section 34-4n-3w, dr.

Fayette County—Parrott & South's Guffey 1, ne se nw ne 1-5n-2e, rigging up rotary.

Jefferson County—S. L. Reinhardt's Inland Steel 1, c s½ se se 36-4s-1e, dr.

Madison County—Fred Jones et al's Riegel 1, se sw sw 17-3n-5w, dr 50 ft.

Perry County—L. C. Simmel's Kimsey 1, 125 ft from north line and 330 ft from east line nw 13-5s-2w, moving in rotary.

Saline County—Alma Oil & Gas Co.'s Federal Chemical & Coke 1, se sw se 9-7s-6e, dk.

Washington County — Kingwood Oil Co.'s Brink 1, c se sw se 15-1s-1w, loc for Devonian test.

Wayne County—Briscoe's Jackson 1, ne nw sw 20-3s-8e, moving in rotary. A. B. Cobb's Gill 1, lot 54, ne nw sw 20-3s-8e, dk. Cuyuna Oil Co.'s (Russell Johnson's) J. Vol. 1, e½ ne ne 23-1s-8e, loc.

White County—Nation Oil Co.'s Hammond 1, c nw se sw 6-4s-8e, dk. Ben Nation's Garrett 1, se se sw 14-4s-8e, top Glen Dean 2805 ft, dr 2900 ft. Phillips' Garner 1, sw ne ne 36-4s-10e, lcn.

COMPLETIONS

Bond County—H. L. Joly & Jenkins' White & Bane 1, sw se nw 17-5n-4w, top Devonian 2044 ft, abnd 2106 ft with hole full of water.

Clark County—D. R. Gooch et al's Davis 1, se se se 17-9n-13w, abnd 737 ft.

Jasper County—Von Huddleston's (Kirk D. Holland's) Fee 1, ne se sw 7-8n-11e, top Fredonia 1905 ft, abnd 1957 ft.

Marion County—Quisenberry's Hawkins 1, nw nw nw 32-1n-4e, deepened from 2948 ft to 2998 ft, abnd. Ned Easley's Humes 1, nw ne ne 13-3n-2e, top McClosky 2453 ft, abnd 2509 ft.

INDIANA
FIRST REPORTS

Dubois County—Frank Damron's Hubert 3, 400 ft from north line and 400 ft from east line, sw sw 25-1s-4w, rig.

Gibson County—Newton Pipe Line Co.'s W. A. Carithers 2, 330 ft from north line and 400 ft from east line se se 26-1s-10w, loc. D. & H. Drilling Co.'s W. W. Sipp 1, se nw se 24-3s-9w, dr 600 ft.

Knox County—J. S. Young, Jr., et al's B. M. Mabes 1, nw nw nw 27-5n-8w, spud.

Martin County—Newton Pipe Line Co.'s N. Hiatt 1, ne ne se 36-4n-5w, loc.

Pike County—H. A. Walker & Rogers' C. Colvin 1, 495 ft from north line and 660 ft from west line, nw ne 30-1n-6w, loc.

Posey County—Al Wilhelmi's Zimmerman 1, 300 ft from north line and 150 ft from east line, se sw 17-7s-14w, waiting on cement with surface casing set at 140 ft.

Randolph County—E. G. Henderson's Ed Warren 1, 465 ft from north line and 1100 ft from east line, ne ne 16-21n-15e, loc.

Spencer County—Kelly et al's Eberhard 1, nw nw sw 9-6s-4w, dr 100 ft.

Vigo County — Ben Nation's (Nation Oil Company's) A. Boyll 1, se se sw 33-11n-9w, dk.

STATE	WILDCATS STARTED		WILDCAT TESTS COMPLETED							
			Total		Oil		Gas		Dry	
	This Week	This Year	This Week	This Year	This Week	This Year	This Week	This Year	This Week	This Year
Alabama	...	5	...	2	...	...	...	...	...	2
Arkansas	2	32	2	22	...	2	...	...	2	20
California	5	175	...	76	...	20	...	2	...	54
Colorado	...	2	...	1	...	...	...	...	...	1
Florida	...	3	...	1	...	...	...	...	...	1
Georgia	...	3	...	1	...	...	...	...	...	1
Illinois	13	472	5	362	...	26	...	2	5	334
Indiana	10	59	4	36	...	9	...	1	4	26
Kansas	4	203	4	195	...	52	...	9	4	134
Kentucky	2	47	2	25	...	8	...	...	2	17
Louisiana	4	112	4	86	...	13	...	3	4	70
North Louisiana	2	38	1	27	...	3	...	1	1	23
South Louisiana	2	74	3	59	...	10	...	2	3	47
Maryland	...	1	...	...	...	...	...	...	...	...
Michigan	6	210	8	273	...	19	...	...	8	254
Mississippi	1	17	...	9	...	1	...	...	...	8
Missouri	1	53	5	27	...	...	1	3	4	24
Montana	...	3	...	2	...	...	...	...	...	2
Nebraska	...	1	...	1	...	...	...	...	...	1
New Mexico	...	33	1	24	...	1	...	1	1	22
New York	...	1	...	4	...	1	...	1	...	2
Oklahoma	5	140	6	145	...	18	...	6	6	121
Ohio	...	4	...	10	...	1	...	...	...	9
Pennsylvania	...	3	...	5	...	...	...	...	...	5
South Dakota	...	2	...	2	...	...	...	...	...	2
Texas	21	869	24	943	2	88	...	19	22	836
East Texas	...	101	1	88	...	3	...	1	1	84
North Texas	1	111	9	182	1	26	...	1	8	154
Gulf Coast	3	86	1	81	1	7	...	1	...	73
Panhandle	1	9	...	8	...	...	...	1	...	7
South Texas	13	402	11	427	...	33	...	13	11	381
West Texas	3	160	2	157	...	18	...	2	2	137
Utah	...	1	...	...	...	...	...	...	...	...
West Virginia	...	2	...	1	...	...	...	...	...	1
Wyoming	...	5	...	3	...	...	...	...	...	3
Total U. S.	74	2,458	65	2,256	2	259	1	47	62	1,950

COMPLETIONS

Delaware County—W. E. Black's Thomas 1, sw nw ne 10-22n-10e, top Trenton 958 ft, abnd 1500 ft with hole full of water.

Marion County—C. E. Jefferson's Hoover 1, nw se se sw 34-17n-3e, top Trenton 938 ft, show gas and stain oil between 940 and 944 ft, abnd 965 ft.

Perry County—Charles E. Dice's Knable 2, nw se sw nw 17-6s-3w, abnd 625 ft.

Tipton County—Fred Eastman's S. Vandeventer 1, 300 ft from south line and 330 ft from west line, se sw 21-21n-3e, top St. Peter 1490 ft, abnd 1495 ft with hole full of water.

KANSAS
FIRST REPORTS

Butler County—Allison et al's Zink 1, sec ne 32-29-5e, ru machine.

Johnson County—McCain et al's Lyons 1, nw sw ne 27-13-22e, dr.

McPherson County—Bennett's Petz 1, cwl nw 8-21-5w, pits.

Reno County—Dutton et al's Greene 1, sec 8-23-4w, rur.

COMPLETIONS

Barton County—Broderick et al's Kowalksy 1, c e½ se ne 30-20-11w, 5 mi sw West Ellinwood pool, top Lansing 3110 ft, top Simpson 3360 ft, abnd 3442 ft, no shows.

Butler County—Simpson et al's Marsh 1, nwc sw 23-28-6e, ¾ mi e Sensebaugh pool, top Mississippi 2810 ft, so 2810-15 ft, top Simpson 3235 ft, hfw 3235-51 ft, top Arbuckle lime 3231 ft, abnd 3251 ft.

Franklin County—Snyder et al's Feeler 1, sw nw nw 27-15-20e, 3 mi s Baldwin pool, top Peru 715 ft, top Squirrel 765 ft, abnd 830 ft, 150,000 cu ft gas.

Leavenworth County—Haworth et al's Mosbacker 1, sec nw 4-10-20e, 12 mi nw Linwood gas pool, abnd rig.

KENTUCKY
FIRST REPORTS

Butler County—South Penn Oil Co.'s E. R. McPherson 1, 450 ft from west line and 140 ft from south line, Section 13-H-32, moving in material.

Daviess County—A. D. Schaeffer et al's Dr. Meddey 1, 144 ft from west line and 1001 ft from north line, Section 3-P-29, shut down at 50 ft.

COMPLETIONS

Hancock County—W. J. Flesher's Cal Young 1, 1500 ft from north line and 2400 ft from east line, Section 1-P-33, trc Ste. Genevieve 763 ft, set 8-in to 765 ft, oil show between 878 and 884 ft, abnd 1464 ft.

Ohio County—C. L. Trusler's Robt. Schroader 1, 450 ft from north line and 2710 ft from east line, Section 3-L-33, abnd 956 ft.

NORTH LOUISIANA
FIRST REPORTS

DeSoto Parish—D. Juan's Frost Lbr. Industries 1, sec sw 14-10n-15w, mim (3100-ft test).

Franklin Parish—Continental Oil Co.'s Federal Land Bank 1, nwc 36-13n-8e, rig up.

COMPLETIONS

DeSoto Parish—A. M. Sutton et al's Frost Lbr. Industries 1, ne se 35-11n-15w, abnd 400 ft.

SOUTH LOUISIANA
FIRST REPORTS

Beauregard Parish—California Co.'s Long Bell Lbr. Co. 2, 960 ft fr e line, 1795 ft s of n line, Sec. 12-5s-10w, lcn.

Iberia Parish—Plymouth's McHugh Heirs 1, 2340 ft w and 330 ft n of Sec. 13-12s-10w, lcn.

COMPLETIONS

Iberville Parish—Housh & Thompson's Folse 1, 440 ft n of s line and 530 ft w of e line Sec. 40-11s-13e, Samstown prospect, 10,323 ft, slight odor of oil, stuck drill stem, abnd 10,823 ft.

Jefferson Davis Parish—Union Sulphur Co.'s Tietje 2, China prospect, Sec. 36-7s-4w, abnd 9543 ft.

St. Martin Parish—Continental's Levert 1, Pine Alley prospect, Sec. 42-10s-7e, taken over from Roper & Todd, dr to 10,700 ft, abnd.

MISSISSIPPI
FIRST REPORTS

Yazoo County — Yazoo Refinery, Inc.'s Brooks 1, ne se 17-10n-2w, mim.

MISSOURI
FIRST REPORTS

Lewis County—Coleman et al's Gosney 1, sw se se sw 23-60n-7w, sd 20 ft.

COMPLETIONS

Adair County—Mayson Oil Co.'s McGonigle 1, cnl se nw 20-63n-13w, top St. Peter 1238 ft, top Everton 1294 ft, top Arbuckle lime 1331 ft, pb 1110 ft, 10 shots 1026-36 ft, 10 shots 1002-12 ft, acidized 500 gals, hfw, abnd 1431 ft.

Clay County — Pabelo Development Co.'s

Bartlett 1, cwl se nw ne 34-52n-32w, Liberty gas pool, top Peru 471 ft, td 755 ft, pb 636 ft, lime 615-19 ft, 170,000 cu. ft. gas, completed.

Harrison County—Elwell et al's Maple 1, ne sw se 3-62n-26w, 12 mi nw Trenton, top Devonian 1135 ft, top Ordovician 1515 ft, hfw 1722 ft in St. Peter, top Arbuckle lime 1805 ft, sso 1722-29 ft, abnd 1907 ft.

Holt County—Markham et al's Gaffney 1, sw se sw 24-63n-40w, 11 mi nw Rockport, abnd rig.

Marion County—Wright et al's Turner 1, c nw nw 27-59n-9w, base Mississippi 538 ft, base Calloway 600 ft, so 612 ft, abnd 650 ft.

NEW MEXICO

COMPLETION

Valencia County—Old Spanish Grants & C. M. Joiner's Poltenghe 1, c ne ne 23-7n-1e, junked 5620 ft.

OKLAHOMA

FIRST REPORTS

Choctaw County—Letchfield et al's Schsusler 1, sw se sw 13-6s-14e, so 1169-81 ft in lime and sand, td 1184 ft, coring.

Lincoln County—McMahon et al's Percival 1, sec 24-12n-3e, lcn.

Osage County—Norbla Drilling Co.'s Osage 1, nw ne nw 9-24n-6e, dr.

Payne County—Helmerich et al, Berry 1, c e½ ne ne 14-17n-1e, lcn. Kirk-Green-Way's Doran 1, nwc sw 32-19n-2e, dr.

Tillman County—Magnolia's Oneyx 1, nw se se 17-3s-16w, lcn.

COMPLETIONS

Greer County—Amos et al's Banks 1, c nw sw 21-7n-22w, 7 mi w Granite pool, top Granite Wash 1460 ft, so 1525-40 ft, abnd 1616 ft.

Kiowa County—Lewis et al's Rhyne 1, sec 29-7n-17w, 1 mi s Hobart pool, sso 677-90 ft, top Pontotoc 625 ft, top Viola 973 ft, top Simpson Bromide 1045 ft, abnd 1191 ft.

Payne County—Blackwell O&G Co.'s Davis 1, sec 24-18n-1e, s Ramsey pool, top Wilcox 4944 ft, top second Wilcox 5055 ft, abnd 5066 ft, salt water.

Pontotoc County—Smith et al's Kahn 1, sec ne 13-3n-4e, 6 mi sw Ada, abnd 490 ft.

Pottawatomie County — Kerr's Harrington 1, nwc 24-9n-4e, 1 mi s West Earlsboro pool, top Hunton 4327 ft, top First Wilcox 4541 ft, cored 4540-51 ft, salt water, abnd 4452 ft.

Seminole County — Sands Petroleum Co.'s Misselda 1, nwc se 13-7n-5e, 1 mi n Hazel pool, top Calvin 2529 ft, top Earlsboro 3105 ft, abnd, td 3134 ft.

EAST TEXAS

FIRST REPORTS

Limestone County—J. R. Bunn Drl. Co. & Willis' Clyde Moore 1, 412 ft from nw and 2640 ft from sw lines of 98-acre tract, or 2300 ft from w and 5450 ft from s lines of G. W. McGrew sur, 1½ mi ne Coolidge, elev 499 ft, dr 1550 ft.

Red River County—Dave Flesh-Hootkins et al's K. M. Bailey 1, 1000 ft from n and 300 ft from e lines of 173.33-acre tract, blk 5, J. Robbins sur, 1 mi w Bagwell, mim for 3500-ft test.

Van Zandt County—O. W. Killam et al's Republic Insurance Co. 1, 330 ft from sw and nw lines of 61.87-acre tract, J. Saligna sur, 2 mi ne Myrtle Springs, dk.

COMPLETIONS

Angelina County—R. H. Patterson et al's C. L. Harrison 1, 330 ft from e and 880 ft from ne lines of 112-acre tract, J. D. LaGarza sur, 5 mi w Pollock, abnd 925 ft.

Limestone County—J. R. Bunn Drl. Co. et al's F. Winmill 1, 300 varas from n and 675 varas e of nwc of J. C. Neil sur, or 2½ mi nw Tehaucana, elev 441 ft, Austin chalk 1752-2110 ft, top Woodbine 2470 ft, abnd 2493 ft.

SOUTHWEST TEXAS

FIRST REPORTS

Bastrop County—Marts & Beaven's Ferguson 1, 2130 ft se line, which is Lytton Spring Cedar Creek Road and 150 ft ne line of 67.5-ac lse out of 135-ac tr, James Doyle sur, lcn.

De Witt County—J. A. Warnken et al's Dubose 1, west of Hochheim, on 2500-ac blk, lcn.

Jackson County—D. W. Moore et al's Clement 1, 330 ft n line, 330 ft w line of blk 18, Clement subd, S. F. Austin sur, Ab-5, rigging up.

Jim Hogg County—Palma Lloyd et al's Palacios 1, 330 ft s line, 330 ft w line of blk 10, G. W. Waddel sur 232, dr 1000 ft.

Jim Wells County—Parr and Delaney Oil Co.'s Lindsay & Reed 1-A, 330 ft w line, 467 ft s line of lot 21, W. L. Whitman subd of Los Altos gr, Teresa Bostillos sur No. 3, salt water sand 5408-94 ft, abnd 7-3-39 at 5740 ft by H. H. Howell; taken over by Parr and Delaney, washing down to set casing and test 4700-foot sand, td 5100 ft. Pohler's Turner 1, Stephen Hays sur, sd 800 ft.

Kimble County—A. L. Bierschwale's Fee 1, 791 ft n line, 588 ft w line of sur 366 and in 4323-ac tr, lcn.

McMullen County—J. H. Lynd's Worley 1, 850 ft nw line, 200 ft ne line of sec 22, Roderick O'Boyle sur and in 806.1-ac tr, rigging up.

Milam County—Green and Owens' Graham 1, 600 ft n line, 100 ft w line of 479-ac lse, Charles Cronea sur, lcn.

Starr County—Herbert Aid's Muniz 1, 150 ft n line, 150 ft w line of sh 12-b, porc 71, Jurisdiction of Camargo, dr 475 ft. Bancroft Dr. Co.'s Guiterrez 1, 330 ft n line, 330 ft w line of ne¼ of blk 15, sh 99, porc 104, coring below 2140 ft.

Victoria County—J. P. Pool, Jr.'s Meyer 2, 236 ft ne line, 325 ft se line of 15-ac tr, blk 1, four league gr, lcn.

Webb County—Ross E. Fenton's Vasquez 1-A, 330 ft n line, 330 ft w line of blk 8, survey 1090, lcn.

Zapata County—J. P. Martin's Vela 1, 330 ft n line, 330 ft w line of lot 59, subd of sh 2, El Grullo gr, mir.

COMPLETIONS

Bexar County—C. A. Smith's Schuwirth 1, 817 ft nw line, 635 ft ne line of blk 2, in de la Garza sur, abnd 1165 ft.

Duval County — Harvey and Henderson's Welder 1, 150 ft n line, 2970 ft w line of Samuel Alexander sur 102, top Cole 1445 ft, top Government Wells 2108 ft, top Mirando 2299 ft, abnd 2698 ft. Magnolia Petroleum Co.'s DCRC 1 (101), 330 ft n line, 330 ft w line, BS&F sur 101, abnd 2735 ft.

Hays County—Mann and Thomas' Reeder 1, 2750 ft e line, 3520 ft n line of 1800-ac tr, R. Vaughn sur, top Edwards 560 ft, abnd 3380 ft.

Jim Hogg County—Magnolia Petroleum Co.'s Merchants State 44, 3630 ft nw line, 3630 ft ne line of S. L. Fite sur 268, abnd 2513 ft.

Jim Wells County—Pat R. Rutherford and Royal Oil & Gas Co.'s Garcia 1, 330 ft n line, 5200 ft w line of 600-ac lse, La Trinidad gr, abnd 6015 ft.

Live Oak County—Norsworthy Prod. Co.'s Knight 1, 330 ft n line, 330 ft w line of J. R. Johnson sur, salt water sand 3910-19 ft, abnd 4013 ft.

Refugio County—Pat Rutherford and Royal Oil & Gas Co.'s Swift 1, 330 ft n line, 330 ft w line of sw¼ of sec 25, Bonnie View Ranch subd, Estabian Lopez gr, salt water 5972-84 ft, abnd 6515 ft.

Starr County—W. W. Zimmermann's Wood 1 (lse 2), 150 ft e'ly w line, 450 ft n'ly n line of 65.7-ac lse No. 2, salt water sand 2749-92 ft, abnd 2792 ft.

Travis County—G. C. Richardson's Chamberlain 1, 2150 ft ne line, 1800 ft se line, James H. Manning sur 37, abnd 738 ft.

Williamson County—Taylor Refining Co.'s Riethmayer 1, 1449 ft s line, 768 ft e line of 256-ac tr, Peter Cartwright sur, abnd 1132 ft.

WEST TEXAS

FIRST REPORTS

Jones County—S. B. Roberts Co. et al's G. I. Jeffreys 1, nw se ne T&P sec 7, blk 15, lcn for 4000-ft test.

Yoakum County—Sloan-Zook Co. & Tom N. Sloan's Mrs. J. E. Fitzgerald 1, sec se sec 22, blk D, J. H. Gibson sur, sp.

TEXAS PANHANDLE

FIRST REPORT

Sherman County—L. R. Hagy-Harrington & Marsh's Wayne Freeman 1, c nw GH&H Ry. sec 46, blk 1-C or 2, rig.

WEST CENTRAL TEXAS

FIRST REPORTS

Tarrant County—Morris & Lucas' O. D. Wyatt 1, 1325 ft from e and 150 ft from s lines of Wm. H. Curry sur, dr 200 ft.

COMPLETIONS

Mills County—Lane et al's Spinks 1, 450 ft from s and 1530 ft from w lines of northwest corner sec 5, but in John Douglas sur, Ranger lime 2408-13 ft, abnd 2430 ft.

Shackelford County — Roeser - Pendleton, Inc.-Continental's Cook 2-A-146, sec 146, E. T. Ry. sur, abnd 1710 ft.

NORTH TEXAS

FIRST REPORT

Clay County—F. W. Merrick et al's T. B. Robertson 1, 330 ft out of swc e½ blk 10, J. H. Belcher subdivision, lcn.

COMPLETIONS

Archer County—H. H. Frasier et al's W. M. Coleman 1-A, 450 ft out of swc blk 24, Coleman sub-div of Brazos C.S.L. sur, Gunsight lime 1587-89 ft, abnd 1704 ft. W. B. Hamilton Pet. Co.'s C. E. Graham 4, 4889 ft s and 400 ft e of nec of F. C. Green 1290-acre tract, J. Levins sur, but in S. Abercrombie sur A-1249, used 500 gals acid in lime 1124-35 ft, pumped 156 bbls oil initial.

Clay County—E. N. Costley et al's W. A. Henderson 1, 860 ft from s and 1920 ft from e lines of D. E. Brannon sur A-37, abnd 1403 ft.

Cooke County—Big Indian Oil & Dev. Co.'s Geo. Gehrig 3, 150 ft w and 200 ft n of m/s/ swc of D. H. Campbell sur, but in W. A. Lynn sur A-1572, abnd 1922 ft.

Denton County—Hughes & Gannon's Dr. Chas. Saunders 1, 1000 ft from s and 331 ft from w lines of S. Noling sur A-965, abnd 1502 ft.

Grayson County—B. G. Chandler et al's E. A. Miller 1, 330 ft out of sec of 40-acre tract in swc Jos. Morrison sur, abnd 2345 ft. J. M. Jones et al's I. Colling 1, Southard sur, 10 mi nw Denison, abnd 601 ft.

Haskell County—P. G. Kendrick et al's T. G. Hendrick 1, 330 ft out of nwc lot 26, sec 1, AB&M sur A-836, top Palo Pinto lime 3191 ft, trace oil 3190-3205 ft, abnd 3259 ft.

Wichita County—J. P. Coleman et al's Williams 1, 3250 ft from s and 1450 ft from e lines of tract, L. Powell sur A-242, abnd 1502 ft.

Wilbarger County—Consolidated Oil Co.-D. E. Hepler's W. T. Waggoner 1-DD, nw sw se H&TC sec 1, blk 5, top lime 3896 ft, abnd 4235 ft.

TEXAS GULF COAST

FIRST REPORTS

Brazoria County—Humble's Smith 1, Bonney prospect, 466 ft n and w of sec of lot 32, Kanawha Texas Co. subdivision, W. D. C. Hall sur, lcn.

Matagorda County—Gulf Stream's Zyprian 1, n of Matagorda, 1360 ft fr n line and 1700 ft fr e line of lease, L. Lassassiere sur, lcn.

Wharton County—S. G. Harrison's Kountz 1, s of El Campo, 660 ft fr n line and 330 ft fr w line of ne¼ of sec 51, E. T. R. R., lcn.

COMPLETIONS

Brazoria County—Glenn H. McCarthy's Carr 1, Anchor area, 363 ft fr n line, 660 ft fr e line of 40 acre tract, J. de J. Valderas sur, dr to 10,538 ft, perf 24 shots 10,460-466 ft, 267 bbls 49-gravity oil.

MICHIGAN

FIRST REPORTS

Allegan County—Vahue & Wray's Smith 1, se nw sw 11-2n-13w, rig. McKenna Oil Co.'s Madejczyk 1, sw nw nw 36-2n-16w, lcn. J. K. Martin's Lortin 1, nw se nw 12-3n-16w, rig.

Barry County — Strange Oil & Gas Co.'s Morgenthaler 1, nw nw nw 10-2n-7w, rig.

Berrien County—Hendershott & Potts' Bennett 1, nw ne sw 9-6s-17w, lcn.

Osceola County—D. E. Huges' Bontekos 1, c s ne ne 11-20n-7w, rig.

COMPLETIONS

Allegan County — Little Four Oil Co.'s Cooley 1, nw ne sw 27-1n-12w, abnd 1481 ft. Miller Brother's Thorpe 1, nw se sw 1-2n-14w, abnd 1600 ft.

Barry County—Strange Oil & Gas Co.'s Wilcox 1, ne ne sw 5-3n-9w, abnd 2085 ft.

Gratiot County—Chapman Oil Co.'s Smith 1, c s½ ne se 20-10n-4w, Dundee 3198 ft, abnd 3256 ft.

Oceana County—W. K. Swan's Skidmore 1, c s se ne 15-16n-16w, abnd 1990 ft.

Ottawa County—Daily Crude Oil Co.'s Herman 1, nw nw ne 11-8n-14w, abnd 1964 ft.

Van Buren County—Adams Drilling Co.'s Dubsky 1, ne sw se 29-1s-15w, abnd 1145 ft. Fisher & McCall's Witter 1, ne ne nw 13-3s-15w, abnd 1134 ft.

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PRODUCING ROYALTIES
ROPER & TODD
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Houston Texas

NOTES FOR THE Equipment Buyer and User

Non-Lubricated Plug Valves

REED ROLLER BIT COMPANY

The Reed Non-Lubricated Plug Valve, manufactured by Reed Roller Bit Company, Houston, Texas, is announced by the company as a simple, sturdy, easy opening, dependable general purpose valve which conforms to all established material, dimension and test standards.

Reed Non-Lubricated Plug Valve

The Reed Non-Lubricated Plug Valve is opened or closed by a single operation—a quarter turn of the stem. The body, bonnet, packing and stem are of conventional design, but the plug, integral with the stem, is cylindrical. The plug is positioned within a corresponding cylindrical bore in the body, but does not contact it. The sealing members are two opposed segments which float in pockets in the plug. The plug segments are lifted off their seats before they are moved to the open position, minimizing friction and assuring ease of operation. Absolutely no lubrication is needed because breaking the segment seal relieves fluid pressure, and this action reduces segment sliding friction to a minimum while the valve is being opened. When the valve is being opened or closed, the forward edge of the segment acts as a wiper and assures a clean seat, free from settlement or abrasives.

Hundreds of applications in a variety of services have proved the qualities of the Reed Non-Lubricated Valve. They are daily demonstrating their ability to satisfactorily handle saturated and super-heated steam, water, oil, gas, acids, boiler blow-down, gasoline, sludges, etc., the announcement says.

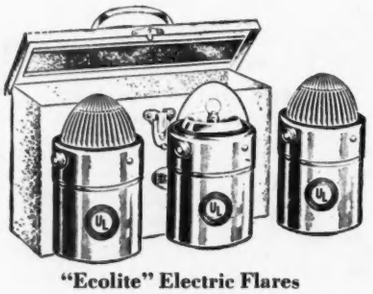
Electric Flares

ECONOMY ELECTRIC LANTERN COMPANY

Economy Electric Lantern Company, 3100 W. Cherry Street, Milwaukee, Wisconsin, announces a set of electric flares that comply with the I.C.C. regulations, and also are approved by the Underwriters' Laboratories for use as warning or danger signals. In their manufacture, the specifications of the S.A.E. and the Bureau of Standards were also followed.

Construction details include an all-steel body cover, made of 24-gauge material and finished in bright red enamel. They are equipped with a heavy ruby red lens and brass contacts are used throughout. The weather-proof switch is of the rotary type, with positive on-and-off positions. The lamp is a Mazda No. 502, having a rated life of 75 hours, and the battery is a standard 6-volt lantern battery, good for from 60 to 80 hours of use.

The flare is weather-proof, vibration-proof and dust-proof. Visibility is one mile under normal conditions. A highly-polished nickel reflector concentrates the light rays in the lens, giving off a strong red light. A compact steel box is furnished, to hold three flares securely and safely.



"Ecolite" Electric Flares

Hydraulic Jack

THE BUDA COMPANY

The Buda Company, Harvey, Illinois, has announced this new model "Variable Speed" hydraulic jack. It is an entirely new type of jack, but the hydraulic principle is the same as that used on the complete line of Buda hydraulic jacks.

One of the principal features of the "Variable Speed" jack is the fulcrum on the lever socket. Adjustment of the fulcrum center changes the length of stroke of the lever bar, and consequently changes the speed at which the load is raised or lowered. The power required to lift the load changes with the speed. Because of this feature of the jack, it can be used for 10, 15, or 20-ton loads.

The details of this Buda "Variable Speed" Jack are illustrated and described in detail in Bulletin No. 965 which will be gladly furnished on request.

Roller Pull Rod Carrier

JARECKI MANUFACTURING COMPANY

Jarecki Manufacturing Company, Tulsa, announces a roller pull rod carrier specially designed for rod lines crossing gullies or streams, where the

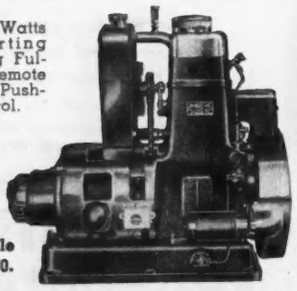
Jarecki Pull Rod Carrier

The Best Answer to Light at the Rig--a

1500 to 8000 Watts Manual Starting Electric Starting Fully Automatic Remote or at Engine Push-Button Control.

WRITE OR SEE YOUR SUPPLY DEALER

Makers of reliable products since 1870.



Witte DIESELECTRIC PLANT

The right answer because these units are dependable and economical. Right because WITTE, maker of reliable products since 1870, and pioneer in the small Diesel field, has never marketed an experiment. The proof is in the use. In oil fields everywhere WITTE Dieselectric Plants, with virtually no care or attention, are plugging away, producing a K.W.H. of electricity from less than a pint of cheap non-explosive fuel. Insure against costly delays—protect your Diesel investment with a WITTE.

1967 Oakland Avenue • Kansas City, Mo.

WITTE ENGINE WORKS

MOLY STEELS

RISKLESS ECONOMY

The absence of corrosive conditions in pumping wells presents an opportunity to save on sucker rod costs by using less expensive steels. But care should be taken to select a steel that fully meets the mechanical requirements of the service. Rod failure is none the less expensive simply because service conditions are easy.

Chromium-Molybdenum (SAE 4130) steel is making an enviable record in sucker rod service. The steel has good tensile and fatigue strength. Furthermore, its excellent yield strength-tensile strength ratio means a high safety factor to take care of possible overloads.

In brief, Chrome-Moly (SAE 4130) offers sucker rod economy without jeopardizing continuous production. It is one of the many Molybdenum steels which are saving time, trouble and money in both drilling and pumping operations. Complete practical information about these steels and their applications is given in our free technical book, "Molybdenum Steels in Oil Production."

MOLY

Climax Molybdenum Company
500 Fifth Avenue, New York City

Main Street to Mexico

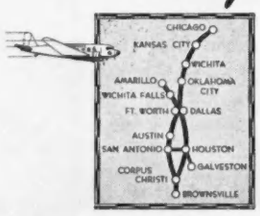
Today, fleet Braniff Douglas B-Liners cast racing shadows over the old "Chisholm Trail," where ox-drawn freighters first linked the commerce of a continent. This southwest "Course of Empire" is still the *main business street* between Chicago and Brownsville on the border, and on to Mexico and all Latin America.

Flying this natural trade route *creates time* to make stop over business contacts in nine major cities—a 5-billion-dollar empire market! Thus "the long, long trail" is vanquished overnight—to Kansas City, Chicago and all the North and East, or South to Mexico City by noon.

And along the way, Braniff people delight in making you their house guest. Delicious meals are graciously served aloft by Spanish-speaking hostesses. In fact, from pilots to porters, service is enriched with a personalized friendliness. Ask your travel agent.

BRANIFF

Airways



GREAT LAKES TO THE GULF

NOTES FOR THE Equipment Buyer and User

"suspension bridge" type of crossing is used.

In an effort to eliminate the cost of hold-ups and hold-downs, or to do away with high rod line posts periodically washed away by water, some companies have resorted to the "suspension bridge" type of crossing. Old wire line and casing is used to form the bridge. The rod line is supported by carriers, which, in turn, are suspended from the wire line by strap iron supports.

The Jarco Roller Pull Rod Carrier is offered with a special suspension frame for this type of installation. The working parts of the carrier are the same as for the regular Jarco carrier. The carrier is oiled just twice yearly, oil being fed from the reservoir within the wheel, through the porous bronze bushing, to the hardened and lapped shaft.

Compact Air Circuit Breaker

WESTINGHOUSE ELECTRIC AND MANUFACTURING COMPANY

Approximately one-half the size of previous devices of the same rating is a new air circuit breaker recently announced by the Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pennsylvania. Among the most important improvements in these new breakers is a "De-ion" arc chamber, a device which is simple in construction, operates on either alternating current or direct current, has long life, and under normal operating conditions requires no maintenance. It operates on any current within the range of established interrupting ratings; arcing current is limited to one-half cycle, which minimizes the noise and flash accompanying the interruption of a short circuit.

The circuit breaker itself is stronger than previous air breakers. No carbon is used in the contacts; and the protective contact supports have been strengthened. Heavy current through the flexible conductors to contact supports causes a magnetic reaction that increases contact pressure and gives increased protection to the main contacts.

Moving parts on the solenoid mechanism have been reduced to a minimum number, the moving core of the mechanism being connected directly to the breaker operating level. The new breakers are adjustable to front-of-board, drawout, back-of-board, and separate enclosure mounting. Five sizes are available, covering a range of operating currents from 15 to 6000 amperes at 600 volts on a-c service—15 to 10,000 amperes direct current—and have interrupting capacities of from 40,000 to 80,000 amperes.

Wire Rope

Hazard Wire Rope Division of American Chain & Cable Company, Wilkes Barre, Pennsylvania, announces publication of a new catalog on Wire Rope, No. 20. This catalog is virtually a pocket-sized handbook on wire rope.

Continental Supply Company to Occupy Enlarged Dallas Quarters

Plans for the addition of eight stories to the six-story Continental Building in Dallas were announced last week by J. W. Morris, president of The Continental Supply Company. Work on the addition will begin October 16. The company leases the building from Crowdus Realty Company and occupies three stories and the basement. Of

Sketch showing proposed addition to the Continental Building at Dallas.

the rebuilt structure Continental will take additional space on the fourth floor while the remaining floors will be used by the oil industry and allied enterprises. Supplementary plans call for the refacing of the entire building with stone and brick, complete air conditioning, latest indirect lighting, and extensive panelling and carpeting.

W. S. McEwen Joins Rector Well Equipment Company

Rector Well Equipment Company announces the appointment of W. S. McEwen for engineering and sales work, with headquarters in the home office at Fort Worth, Texas. McEwen is a graduate mechanical engineer from

William M. Barret, Inc.

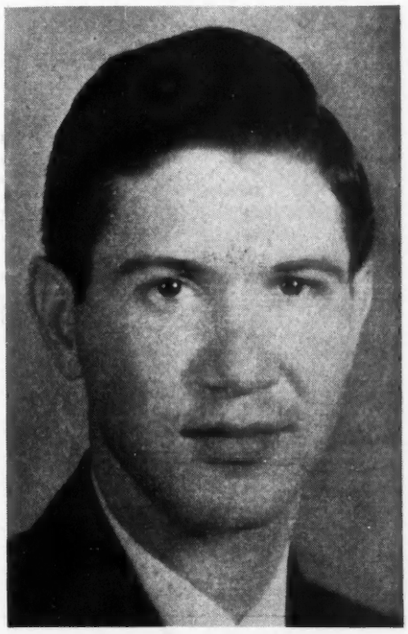
Consulting Geophysicists

Specializing in Magnetic Surveys

Contracts accepted for domestic and foreign projects, using the most improved instrumental and interpretative technique.

GIDDENS-LANE BUILDING
SHREVEPORT, LOUISIANA

NOTES FOR THE Equipment Buyer and User



W. S. McEWEN

Oklahoma A. & M. College, served two years on the staff of International Derrick & Equipment Company in Beaumont, and for the past eight months did research work for Wallace Davis & Company, Houston.

Well Equipment Moves C. A. Polk to Houston

Well Equipment Manufacturing Corporation announces the transfer of C. A. Polk from Long Beach, California, to the Gulf Coast territory, to work out of the Houston headquarters office. Polk, a petroleum engineer out of the University of Oklahoma, was appointed the company's West Coast representative early in 1938, working with Petroleum Equipment Company, exclusive distributor in California for Well Equipment Manufacturing Corporation products.

C. A. POLK

Cargo Hose

A four-page catalog section on "Oil Hose for Cargo Handling" has just been published by The B. F. Goodrich Company, Akron, Ohio.

This type hose is used in refineries and distributing terminals, on oil tankers and barges, for loading and unloading oil cargoes and to conduct oil and gasoline from sea lines to tankers, as well as pontoon work and many other services where flexible connections are necessary.

The catalog section describes four types of Goodrich dock loading hose, three types of barge loading hose, and one of sea loading hose, as well as fittings and suggestions on just what

KEEPING 'EM ROLLING . . . . By WESTCOTT

THAT'S THE THIRD TIME WE'VE PACKED HER IN SIX MONTHS, EDDIE; SHE SURE DOES BURN 'EM UP!
YEAH, BUT YOU KNOW WHY. NEXT TIME SHE BLOWS, I GOT AN IDEA FOR THE BOSS*

J-M SEA RINGS: the long-lasting packing that seals on the work stroke; releases on return.

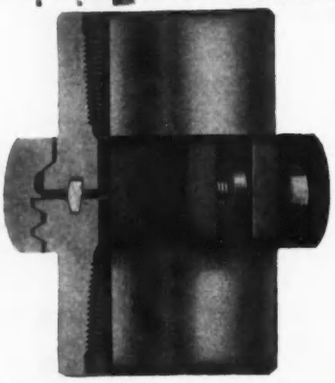
***EDDIE'S IDEA . . . Get Better Packing and Save Time and Money**

THE expensive part of most repacking jobs is labor, idle equipment and general shutdown expense. That means the most efficient and durable packings you can buy are the most economical in the long run. Johns-Manville Packings are that kind of packings, and they cost no more than ordinary materials. The complete J-M Line is described in the J-M Packing Catalog. For your copy, write Johns-Manville, 22 East 40th Street, New York City.

JM Johns-Manville

PACKINGS & GASKETS THERE'S A DISTRIBUTOR NEAR YOU

Red-Rex
QUICK-JOINT
PIPE UNIONS



High Pressure Steel Unions — 3,000 lbs. and 6,000 lbs. test. Renewable seal ring with three tapered sides gives leak-proof joint. One straight side secures seal ring in one hub. Scientifically designed threads allow for contraction and expansion; equalize pressure at all points; line up off-center hubs.

WRITE FOR PRICE LIST NO. 117

OIL CITY BRASS WORKS
Founders—Manufacturers—Machinists
BEAUMONT, TEXAS—U.S.A.
Export Office:
136 Liberty St., New York City, U.S.A.
Sold Through Supply Stores

THE FORT WORTH LABORATORIES

Analysis of oil field brines, cores, gas, oil, and minerals. Field gas testing. R. H. Fash, Vice-President; Long Distance 138. 828½ Monroe Street, Fort Worth, Texas.

JACK A. SCHLEY
Patent Attorney
(Established 1902)
PATENTS—INFRINGEMENTS—OPINIONS
San Antonio—Washington, D. C.
906 SECOND NAT'L BANK BLDG. — HOUSTON
1807-11 TOWER PETROLEUM BLDG. — DALLAS

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Patents, Trade Marks, Copyrights and Infringement Litigation
HARDWAY & CATHEY
428-29-30 Bankers Mortgage Bldg.
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Standco
NO-SMOKE
STANDCO BRAKE LINING
Stands the gaff and gets the job done without scoring brake rims. See page 2100 Composite Catalog.
Standco Brake Lining Co.
HOUSTON

NOTES FOR THE Equipment Buyer and User

equipment to use in various services.

One of the features is approximate data on each type of hose, including number of plies, net weight pounds per foot without fittings, and outside diameter.

Dowell Appoints Stirling to Important Sales Post

Dowell, Incorporated. announces the appointment of Marshall L. Stirling as a member of its general sales staff in Tulsa, in the capacity of sales engineer.

Stirling came with Dowell June 1 from The Gas Lift Corporation where he served as sales manager in Houston. Prior to his connection with The Gas Lift Corporation he was field engineer and assistant to the general superintendent of the natural gas and gasoline department of Magnolia Petroleum Company in Dallas. He also was associated a number of years as sales engineer with R. B. Hall Company of Dallas, handling the Special Industries Department of the Philip Carey Company. He will be closely associated with R. D. Shaw, sales manager, acting as special account representative and sales supervisor for outlying districts.

M. L. STIRLING
Sales Engineer, Dowell Incorporated

CHARLES E. LAMBERT

Horn Enlarges Houston Plant and Appoints Vice President

A. C. Horn Company, New York, announces enlargement of its Houston petroleum division to provide quarters for warehousing "Horn Kem," a chemical mud stabilizer for drilling purposes, and appointment of Charles E. Lambert as vice president and sales manager for that division.

A. C. Horn Company's new addition to the Houston plant to take care of "Horn Kem," a chemical stabilizer for drilling mud. From left to right are: Tom McDonald, head of the New Orleans division; Joe Branch, South Texas division; A. L. Huntley and Ed. McCabe, Houston division; and Ivy Baker, Beaumont division.

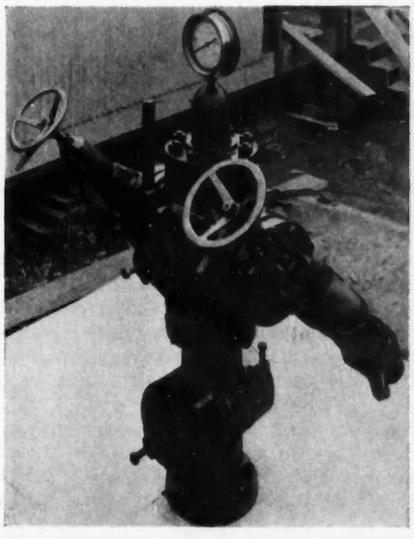
NOTES FOR THE Equipment Buyer and User

Art Nixon Joins B. S. & B. Mid-Continent Staff

Art Nixon, vice president and sales manager for Happy Belting Company the past three years, has joined the sales organization of Black, Sivalls & Bryson, Inc. He will be stationed at Fort Worth and cover Texas, Louisiana, New Mexico and other oil country states.

Nixon, who has been with Happy Belting Company since 1924, came to the Mid-Continent in 1920 to represent Norwalk Tire & Rubber Company of Norwalk, Connecticut. In this capacity he contacted the Happy company, sold them and after covering Oklahoma for the Tulsa firm, left Norwalk to join the Happy organization. In his connection with Happy, he was thrown in close association with the B. S. & B. organization and he says it was a natural outgrowth of this association which culminated in his joining the latter company.

ART NIXON



MacCLATCHIE COMPACT CHRISTMAS TREE HOOK-UP

. . . uses two MacClatchie Plastic Packed Hydro-Seal Plug Valves, (3" or 4") . . . and two MacClatchie Adjustable Flow Beans. 3-point construction of top valve allows flow through **either** or **both** beans, or complete shut-off, **merely by rotating plug in different directions!** Full diameter round opening top to bottom for running swabs, light tools, etc., without removing tree from well head. Both valves "Plastic Packed" and lubricated with "Lubricheck" to assure easy turning, repacking and lubricating under pressure **without closing the line.** Bean openings adjustable 1/64" to 1" volume area through venturi tube . . . larger sizes available. Unit easily shipped set up as shown . . . is compact (conserving space) and can be installed on tubing or casing head in a few minutes. Factory tested to 6000 lbs. Working pressure, 3000 lbs.

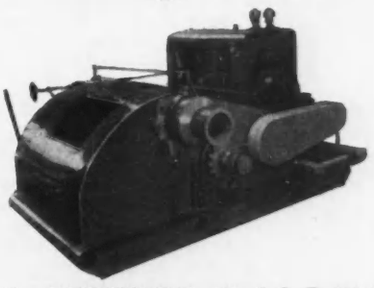
Send TODAY for Complete Information!

MacCLATCHIE MANUFACTURING CO.
COMPTON, CALIFORNIA HOUSTON, TEXAS
EXPORT: GEO. R. WOODS, 17 BATTERY PLACE, NEW YORK, N. Y.

CHARLES E. BYARS

Charles E. Byars, of Stroud, Oklahoma, has been employed by the Venezuelan government to supervise the drilling operations of a "Slim-Hole" model E-4000-A, portable rotary drilling unit, recently purchased from Franks Manufacturing Corporation. The unit, which is a complete rig with derrick, swivel, kelly, rotary table, engines, pumps, and drawworks, unitized on a tandem heavy-duty truck, will be shipped from Tulsa to La Guaira, Ven-

For Economical Drilling to 3000'



This BREWSTER Model D-336

Compactly unitized on a skid-type structural steel all-welded frame. Completely enclosed with streamlined guards. Extra wide brakes, fully equalized. Approximate weight including motor 11,185 pounds. Write for complete specifications or turn to our section in the Composite Catalog.

The BREWSTER CO., Inc.
Phone 2-3181 **Shreveport, La.**
New Iberia - Houma - Lake Charles - Rodessa Bunkie

VARIABLE Control
PRACTICALLY UNLIMITED RANGE

with OTIS REMOVABLE BOTTOM HOLE REGULATOR

Under average conditions this long-needed tool makes possible an almost unlimited range in rate of production after flowing pressures have been reduced to a **safe, non-freezing** point.

OTIS "Don't Kill Your Well" Call OTIS

Write or call today

OTIS PRESSURE CONTROL, Inc.
DALLAS, TEXAS
Branches: Houston, Texas - Hobbs, New Mexico
Oklahoma City, Oklahoma

ezuela. Byars, who will accompany the unit, is to supervise the drilling operations in its initial use and instruct Venezuelan drilling crews. Byars has had considerable drilling experience, having supervised drilling operations in the Rocky Mountain and Mid-Continent areas for a number of years, and more recently with Phillips Petroleum Company operating Franks "Slim-Hole" units in the Kansas area.

Hake Tool Company Distributor for MacClatchie

MacClatchie Manufacturing Company, Compton, California, has announced appointment of Hake Tool Company, Liberty Road at Homestead, Houston, Texas, as sole distributor in Mid-Continent for all oil field equipment manufactured and sold by MacClatchie.

Hake Tool Company covers all the Mid-Continent fields and Illinois for various other oil equipment manufacturers.

International Geophysics Opens Illinois Office

International Geophysics, Inc., of Los Angeles, California, has announced the opening of an Illinois office at Mt. Vernon. Daniel F. Elam will supervise the fluid-level measurement service thus made available to Illinois basin operators.

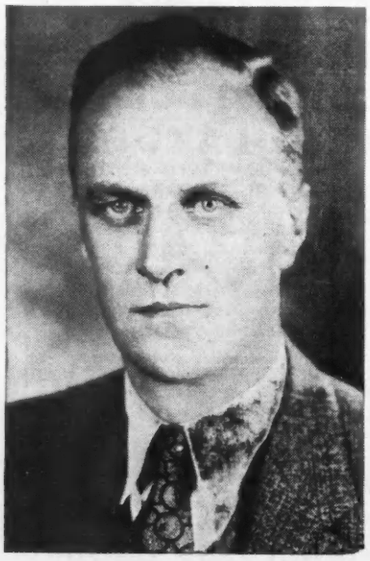
Dowell Announces Changes in Tulsa Sales Office

J. H. (Jack) Finney, formerly station manager for Dowell, Incorporated, at Midland, Texas, has been transferred to Tulsa as sales engineer. He is taking over the former duties of Jas. L. Coss, who has been transferred to the research department.

Pranger to Specialize in Developing Tools for Guiberson

The Guiberson Corporation, Dallas, Texas, has announced that Albert Pranger, who has served the corporation as chief engineer for four years, will henceforth engage in special field research, the purpose of which will be to discover opportunities for improving the present equipment manufactured by the corporation and to find and develop new oil field tools. This work will definitely organize the corporation's search and development of new oil field specialties, placing its effort in this direction on the basis of a consistent and continuous program.

Pranger's headquarters will be at the main office at Dallas.



ALBERT PRANGER

Glasscock Addresses Nomads On South American Business

A. G. Glasscock, foreign trade counsel for the Los Angeles chamber of commerce, recently addressed the Los Angeles chapter of the Nomads on the possibility of increasing trade of American manufacturers of oil field equipment with South American countries.

Wyatt Metal Host to Houston Purchasing Agents

Wyatt Metal & Boiler Works' Houston plant was host to approximately 100 members and associate members of the Houston Purchasing Agents Association with an informal barbecue luncheon Tuesday, October 10, at noon. The visit to the Wyatt plant represents one of the series of customary plant visitation meets of the Houston association, the occasion for the tour of Wyatt's plant at this time being to inspect the job of fabricating many thousands of feet of 24-inch special pipe to be used in the new paper finishing mill at Lufkin. Members of the Purchasing Agents Association were enabled to see the complete process of fabricating this large diameter pipe, the first industrial job of its kind in Houston.

It's a Fact — Johnston

24% OF THE WELLS DRILLED IN THE UNITED STATES ARE DRY!

UNITED STATES BUREAU OF MINES FIGURES REVEAL THAT IN THE FIRST SEVEN MONTHS OF 1939 THERE WERE 15,092 OIL WELLS COMPLETED IN THE UNITED STATES AND 3,653 OR 24% WERE DRY.

IT IS POSSIBLE MANY OF THESE 3,653 WELLS WHICH WERE REPORTED DRY DRILLED THROUGH FORMATIONS CAPABLE OF COMMERCIAL PRODUCTION – WITHOUT THE OPERATOR KNOWING IT! THE USE OF THE JOHNSTON FORMATION TESTER WOULD HAVE ENABLED THESE OPERATORS TO LOCATE PAY PRODUCING SANDS THAT ARE OFTEN MISSED.

IN NEW FIELDS AS WELL AS OLD, THE JOHNSTON TESTER HAS PROVED ITS VALUE BY DISCOVERING INNUMERABLE PAY FORMATIONS. THE TOOL IS SIMPLE TO USE AND INVOLVES NO RISK TO YOUR EQUIPMENT. TESTS CAN BE MADE IN ANY HOLE, CASED OR UNCASED, AND THE NOMINAL COST OF ONE TEST MAY BE REPAID MANY TIMES OVER BY THE DISCOVERY OF OIL SANDS WORTH THOUSANDS OF DOLLARS TO YOU!

SO DON'T GAMBLE. SAVE COSTLY STRINGS OF CASING. USE THE JOHNSTON FORMATION TESTER AND KNOW IN ADVANCE THE COMMERCIAL POSSIBILITIES OF EVERY LIKELY SAND YOU ENCOUNTER IN YOUR WELL.

WRITE DEPARTMENT 310-A FOR ILLUSTRATED BOOKLET GIVING ALL THE FACTS ABOUT THE JOHNSTON TESTER AND JOHNSTON TESTING METHODS...

Johnston

FIVE DOLLARS ($5.00) WILL BE PAID FOR EACH INTERESTING OR UNUSUAL FACT CONCERNING THE PETROLEUM INDUSTRY (EITHER IN THE UNITED STATES OR ABROAD) WHICH IS USED IN THIS SERIES OF JOHNSTON ADVERTISEMENTS. SUBSTANTIAL PROOF MUST ACCOMPANY EACH CONTRIBUTION. WHEN TWO OR MORE SIMILAR FACTS ARE SENT IN, THE AWARD WILL BE GIVEN TO THE FIRST ONE RECEIVED ...

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"WHY SET CASING BEFORE YOU KNOW!"

Squeaks from the Bull Wheel

Bother

"Do you know what happens to little boys who smoke?"

"Yes, I do. Every time they go somewhere to have a quiet smoke, they get bothered by nosey old men.

Social Etiquette

"What would be the proper thing to say if, in carving the duck, it should skid off the platter and into your neighbor's lap?"

"Be very courteous. Say, 'May I trouble you for that duck?'"

For Motorized Infantry

An Australian the other day tried to enlist at Sydney. He was refused on account of bad feet. Next morning he presented himself once more before the doctor.

"It's no use; I can't take you. You couldn't stand the marching," said the medico. "But why are you so insistent?"

"Well, Doc," said the other, "I walked 187 miles to get here and I hate to walk back."

Billiard

Captain Bolte: "How have you made four straight hits? Your range is 100 yards and your sight is set at 600?"

Pyt. Siteless: "See that little stone about half way up there? Well, I'm banking 'em off that."

Why Poets

"Your handwriting's so indistinct I can hardly read these poems of yours. Why didn't you type them before bringing them to me?"

"Type them? D'you think I'd waste my time writing poetry if I could type?"

Young Webster

"Johnny. What do you understand by the word 'deficit'?"

"It's what you've got when you haven't got as much as if you just hadn't nothin'."

Her First Thought

The teacher was trying to make Elsie understand subtraction and she said: "You have 10 fingers, now supposing there were three missing what would you have then?"

"No music lessons," said Elsie promptly.

Absent-Minded

"Carter is the most absent-minded chap I ever met."

"What's he been doing now?"

"Why, this morning he thought he'd left his watch at home, and then took it out to see if he had time to go back and get it."

"That isn't as bad as the time when he left his office and put out a card saying he'd be back at 3 o'clock. Finding he'd forgotten something, he went back to his office, read the notice on the door, and sat down on the stairs to wait until 3 o'clock.

Asked for It

"Sir, your daughter has promised to become my wife."

"Well, don't come to me for sympathy; you might know something would happen to you, hanging round here five nights a week!"

Hey! That Man's in Again

"I notice that you mix some newspaper clippings in the mash for your cow."

"Yes, we make print butter for the fancy trade."

Fate Deserved

"You will never amount to anything unless you turn over a new leaf. Remember, it's the early bird that catches the worm!"

"How about the worm? What did he get for turning out so early?"

"My son, that worm hadn't been to bed all night; he was on his way home!"

"I" Trouble

"You forgot to dot an "i" in your signature."

"Would you mind dotting it for me?"

"I'm sorry, but it has to be in the same handwriting."

Slow Motion

"What do you charge for extracting a tooth?"

"$5."

"$5 for only two second's work?"

"Well, if you wish, I can extract it very slowly."

Original Idea

"Did anyone ever tell you how wonderful you are?"

"I don't believe they ever did."

"Then where'd you get the idea?"

Sad

"I hope that's a nice book for you to read," said the fond mother to her young daughter.

"Oh, yes, mother, it's a very lovely book, but I don't think you would like it. It's so sad at the end."

"How is it sad, dear?"

"Well, she dies and he has to go back to his wife."

Good Beginning

"Our baby is beginning to recite 'baa, baa; black sheep, have you any wool?'"

"And he's only eight months old?"

"Well, he doesn't say all of it yet, but he's got as far as the 'baa, baa.'"

Model Man

"My husband has no bad habits whatsoever. He never drinks and he spends all his evenings at home. Why, he doesn't even belong to a club."

"Does he smoke?"

"Only in moderation. He likes a good cigar after he has a good dinner, but I don't suppose he smokes two cigars a month."

CLEAN-OUT

MILLER

Sand and sediment in your wells make them poor producers—clean them out quickly at small cost with a MILLER—*the Sand Pump in World-Wide use!*

The MILLER is made in diameters of 2½, 3, 3½, 4, 4¼, 5, 5½, 7 and 9 inches and lengths of 20, 25 and 30 feet. 5/32-inch wall thickness in REGULAR Type, ¼-inch wall tubes HEAVY Type Sand Pumps.

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- **STAR BOTTOM** — Used for cutting the sand loose.
- **CHISEL BOTTOM** (In Pump) — With this bottom tightly packed sand can be easily broken in small pieces so it can be picked up in the pump.

Write for Descriptive Folder and Price List

See Pages 1564-65 COMPOSITE CATALOG

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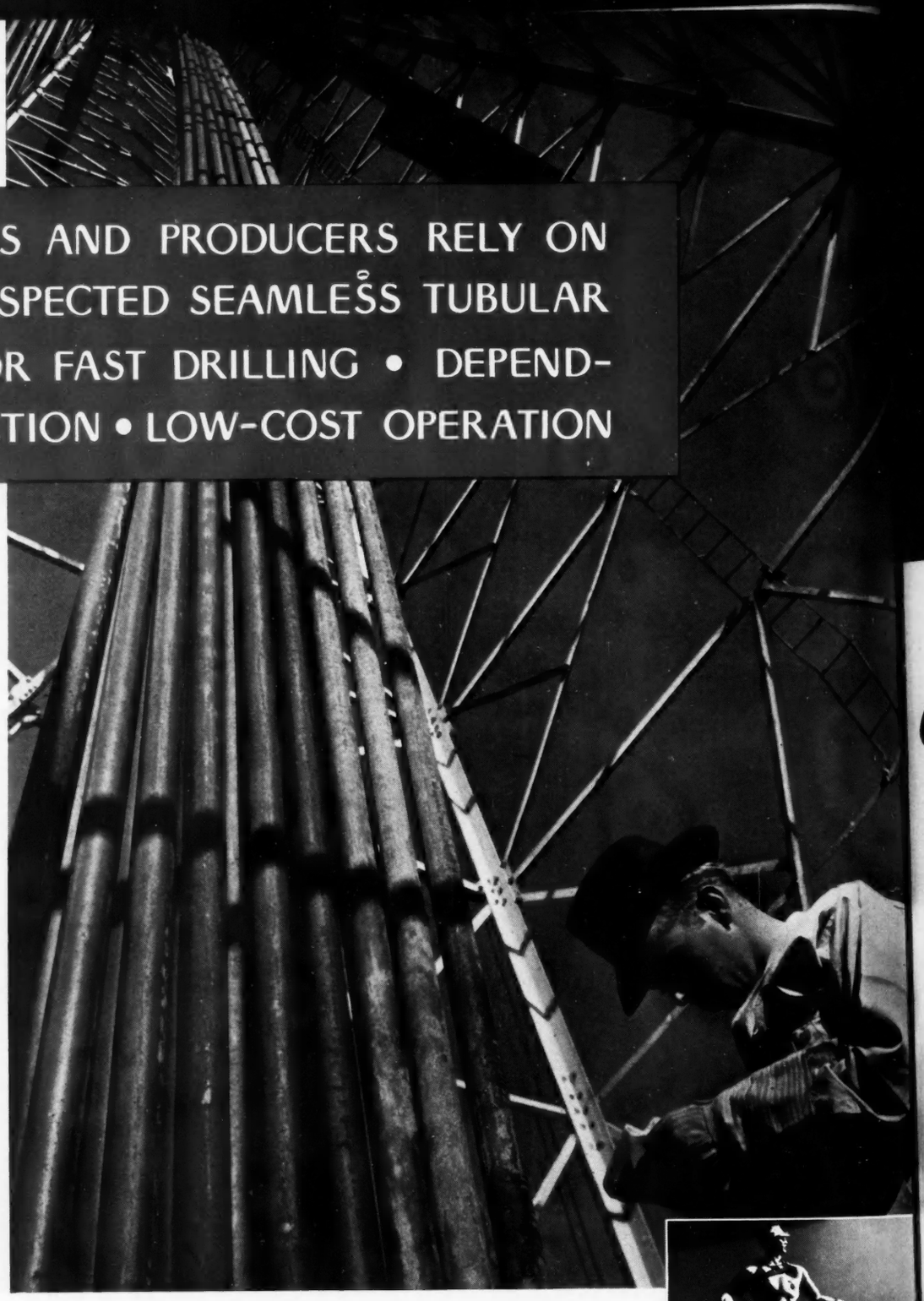

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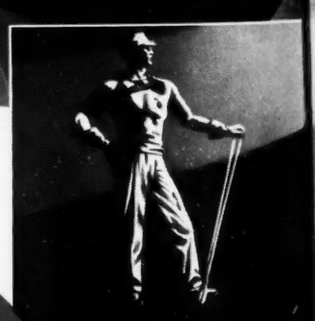

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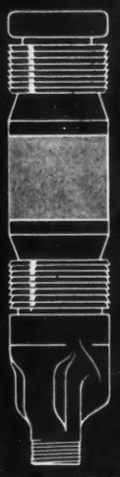
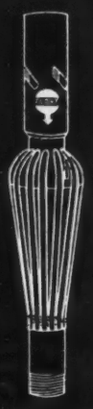


Baker Model "K"
Cement Retainer



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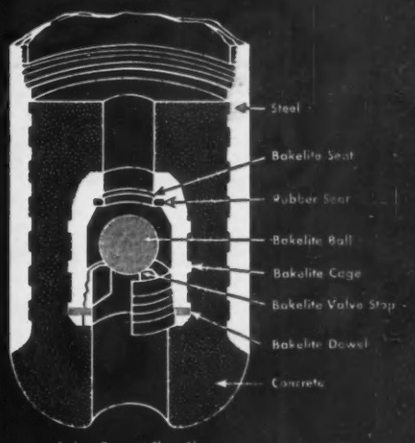

Baker Cement Float Shoe

Successful Oil Tools

ARE "DEVELOPED" NOT "DISCOVERED"

THE HISTORY of the machine age is a continuous story of discoveries . . . discoveries which opened the vistas to the remarkable period in which we now live. Discoveries, however, while tremendously important, are only the nucleus or starting point, for to be of commercial value most "discoveries" or inventions must be "developed."

It is both fortunate and unfortunate that oil tools are no exception to this rule. Fortunate because it is only through this tedious development period of trial and error that the refined product or tool can result . . . unfortunate perhaps (from the manufacturer's cost standpoint), because usually the development period continues more or less indefinitely as the result of constantly changing conditions under which the tool must operate; or requirements such as higher efficiencies which must be met.

Thus, products, such as make up the Baker Line of Oil Tools, which have been some thirty years in the development process, acquire a certain "face value" which operators have been quick to recognize and appreciate. Oil men the world over know that a tool or device bearing the word "Baker" reflects an invaluable background of accumulated experience . . . a background that results in the ability of each and every Baker tool to successfully perform the task for which it was designed.

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The familiar Baker slogan "Practical and Dependable," is more than simply a play on words . . . it means just that, for to be successful, oil tools must necessarily be "practical and dependable" and practicability and dependability result from constant *development* . . . not *discovery* alone.

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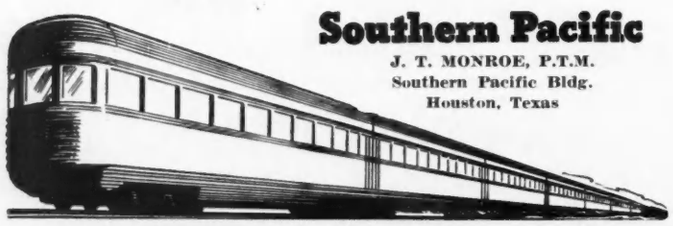

Southern Pacific

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SHIP VIA SP—FREE PICK-UP AND DELIVERY SERVICE

LOOKING AHEAD

WITH THE EDITOR

Removing Paraffin.
Arabian Conditions.

PARAFFIN deposits in pumping wells always have been a problem to the oil operator, and it is necessary that such accumulations be removed regularly from the tubing or prevented from forming in it. There are two methods of accomplishing this desirable action, namely by chemical and mechanical means. A series of two articles is to be devoted to this subject. The first installment is to deal with chemical removal means, which have been effected in so many areas under so many different conditions that it is past the experimental stage. The article describes the methods commonly used, and the results obtained in some regions. The second part of the series will be on the subject of mechanical removal of paraffin from pumping wells.

MOST of us like to know something of the living conditions and working environments of men in foreign fields. We have just accepted for publication in THE OIL WEEKLY an article on Arabia that was exceptionally interesting to us. The author spent enough time in the country to have absorbed and observed enough to present an accurate description. And he gives enough of the insight into Arabia's future as an oil producing area to make the article doubly attractive.

The OIL WEEKLY, Published every Monday. Entered as second-class mail matter December 23, 1916, at the post office at Houston, Texas, under act of March 3, 1879.